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# MARKETING and TRANSPORTATION SITUATION



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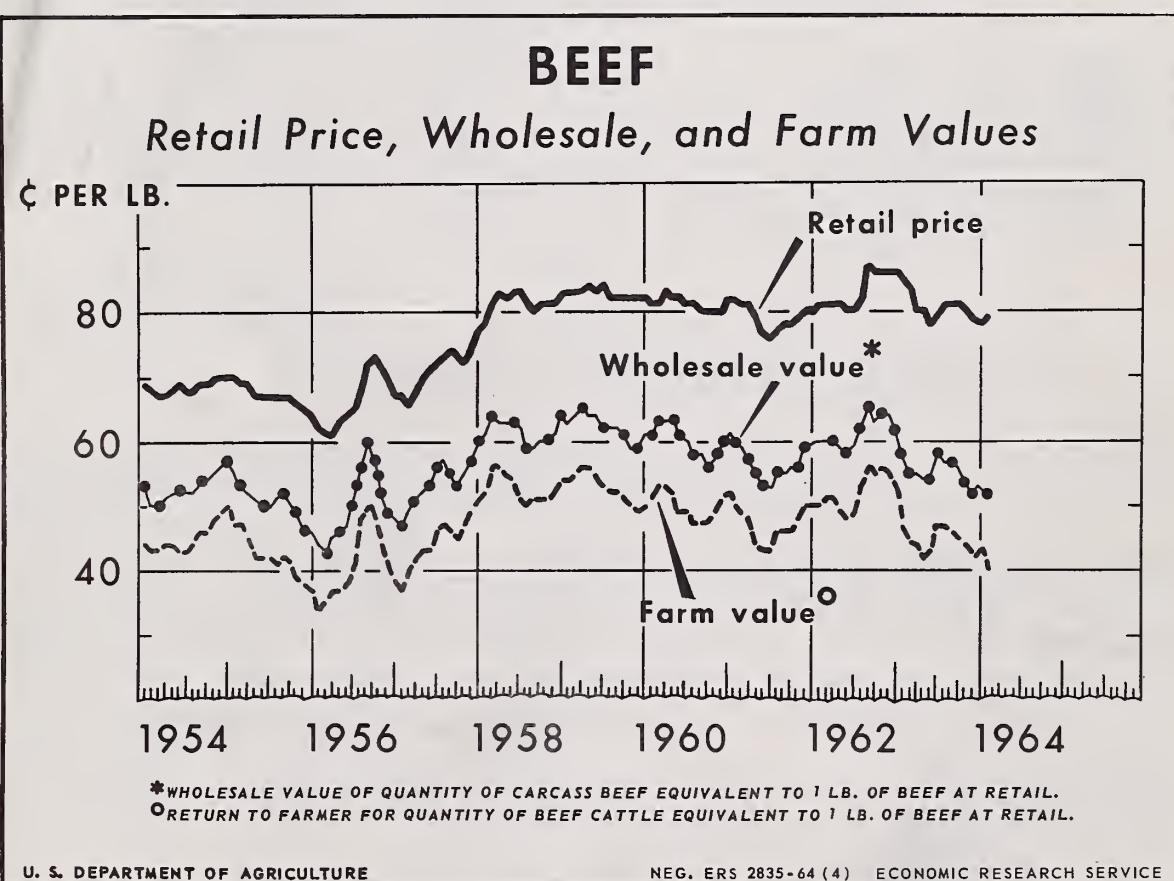
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The retail price of Choice beef often lags a month or so behind changes in the farm value (the return to farmers for the quantity of live cattle equivalent to a pound of beef). Moreover, the retail price generally changes less than the farm value. The spread between the two tends to widen when cattle prices decline and to narrow when prices rise in response to changes in supply. Thus, changes in the supply of cattle account for much of the short-run variation in the spread.

But decreases in the spread from 1954 to 1963 usually were not as large as preceding increases, so the spread widened over the long term. About three-fourths of the increase in the farm-retail spread from 1954 to 1963 was in the retailer's spread.



## IN THIS ISSUE

- Price Spreads for Beef
- Modified and Conventional Layouts in Food Stores
- Traffic Pattern of Raw Cotton Shipped From Warehouses
- Transportation Developments

## STATISTICAL SUMMARY OF MARKET INFORMATION

Item	Unit or base period	Year	1963			1964	
			Jan.-Mar.	July-Sept.	Oct.-Dec.	Jan.-Mar.	
<u>Farm-to-retail price spreads</u>							
Farm-food market basket: 1/							
Retail cost .....	Dol.	1,078	1,080	1,087	1,075	1,078	
Farm value .....	Dol.	394	400	397	391	395	
Farm-retail spread .....	Dol.	684	680	690	684	683	
Farmer's share of retail cost .....	Pct.	37	37	37	36	37	
Cotton: 2/							
Retail cost .....	Dol.	2.17	2.17	2.17	2.16	---	
Farm value .....	Dol.	.32	.33	.32	.32	---	
Farm-retail spread .....	Dol.	1.85	1.84	1.85	1.84	---	
Farmer's share of retail cost .....	Pct.	15	15	15	15	---	
Cigarettes: 3/							
Retail cost .....	Ct.	27.8	---	---	---	---	
Farm value .....	Ct.	3.86	---	---	---	---	
Federal and State excise taxes .....	Ct.	12.5	---	---	---	---	
Farm-retail spread excluding excise taxes .....	Ct.	11.4	---	---	---	---	
Farmer's share of retail cost .....	Pct.	14	---	---	---	---	
General economic indicators							
Consumers' per capita income and expenditures: 4/							
Disposable personal income .....	Dol.	2,125	2,093	2,131	2,157	2,192	
Expenditures for goods and services .....	Dol.	1,970	1,950	1,976	1,994	2,030	
Expenditures for food .....	Dol.	399	397	400	399	---	
Expenditures for food as percentage of disposable income .....	Pct.	18.8	19.0	18.8	18.5	---	
Hourly earnings, production workers, manufacturing: 5/							
Hourly earnings of food marketing employees 6/....	Dol.	2.46	2.44	2.51	2.51	2.51	
Retail sales: 7/							
Food stores .....	Mil. dol.	4,932	4,853	5,031	5,007	---	
Apparel stores .....	Mil. dol.	1,200	1,207	1,250	1,268	---	
Manufacturers' inventories: 7/							
Food and beverage .....	Bil. dol.	6.03	6.03	6.05	6.14	---	
Textile .....	Bil. dol.	2.89	2.63	2.85	2.82	---	
Tobacco .....	Bil. dol.	2.31	2.44	2.36	2.37	---	
Indexes of industrial production: 8/							
Food and beverage manufactures .....	:1957-59=100	116	116	120	119	---	
Textile mill products .....	:1957-59=100	117	114	118	119	---	
Apparel products .....	:1957-59=100	126	123	132	---	---	
Tobacco products .....	:1957-59=100	115	114	113	---	---	
Index of physical volume of farm marketings .....	:1947-49=100	140	108	159	115	113	
Price indexes							
Consumer price index 5/.....:1957-59=100		106.7	106.2	107.6	107.6	107.8	
Wholesale prices of food 5/.....:1957-59=100		100.4	99.0	102.1	100.3	100.4	
Wholesale prices of cotton products 5/.....:1957-59=100		100.3	100.2	101.3	101.2	101.0	
Wholesale prices of woolen products 5/.....:1957-59=100		100.8	100.8	103.2	103.3	103.4	
Prices received by farmers 9/.....:1957-59=100		100	99	101	99	99	
Prices paid by farmers, interest, taxes, and wage rates 9/.....:1957-59=100		106	106	107	107	107	

1/ Average quantities of farm food products purchased per wage-earner or clerical-worker family in 1952. Estimates of the farmer's share do not allow for Government payments to producers. 2/ Data for average family purchases in 1950 of 25 articles of cotton clothing and housefurnishings divided by number of pounds of lint cotton required for their manufacture; see U. S. Dept. Agr. Mktg. Res. Rpt. 277. 3/ Data for package of regular-sized popular brand cigarettes; farm value is return to farmer for 0.065 lb. of leaf tobacco of cigarette-types; data for year ended June 30, 1963. 4/ Seasonally adjusted annual rates, calculated from Dept. of Commerce revised data. First quarter 1964 data are from preliminary estimates by the Council of Economic Advisers. 5/ Dept. Labor. 6/ Weighted composite earnings in food processing, wholesale trade, retail food stores, calculated from data of Dept. Labor. 7/ Seasonally adjusted, Dept. Commerce. Sales data for 1962 are averages of monthly totals (unadjusted). Inventory data for 1962 are book values at end of year (adjusted). 8/ Seasonally adjusted, Board of Governors of Federal Reserve System. 9/ Converted from 1910-14 base.

THE MARKETING AND TRANSPORTATION SITUATION

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SUMMARY

Charges for marketing farm-originated food products, as measured by the spread between the retail cost and farm value of the "farm-food market basket," averaged about the same in the first quarter this year as in preceding 3 months and in the first quarter of 1963. Marketing charges for all major product groups except meat products were higher than a year earlier, but increases for most groups were small.

Prices received by farmers for the products in the market basket averaged about 1 percent higher in the first quarter of 1964 than in the final quarter last year. Most of the increase resulted from higher prices for fresh vegetables and for oranges used in frozen concentrate and canned juice. However, prices received by farmers for the market basket products averaged 1 percent lower in the quarter just ended than a year earlier. Lower prices for beef cattle, hogs, broilers, and eggs accounted for most of the decline in the average. These decreases were partly offset by higher prices for some fresh

vegetables, oranges for processing, and several other products.

Retail prices of domestic farm-originated food products averaged about the same in the first quarter this year as in the preceding quarter and in January-March 1963.

Farmers received 37 cents of the dollar consumers spent for farm foods in retail food stores in January-March 1964, 1 cent more than in the final quarter last year and the same share as in the first quarter of 1963.

Total net income of leading corporations that process and distribute farm products was larger in 1963 than in 1962. Net income as a percentage of sales was the same or a little higher last year for all groups of companies, except those operating department and specialty stores. Net income as a percentage of net assets was higher in 1963 than in 1962 for several groups of companies. This percentage, however, averaged lower for

leading companies manufacturing tobacco products and clothing and apparel and those operating department and specialty stores. It was the same as in 1962 for leading manufacturers of textile products and for retail food chains.

Notable changes occurred in transportation during 1963. Most of them resulted from keen competition between railroads and trucks and between railroads and barges. Sometimes, all three types of carriers were involved.

Rail freight charges for particular hauls and services tended to decline between points where large volumes of traffic usually move, especially on grain for export moving from inland points. Most of these reductions were initiated by carriers serving grain producing areas and ports on the Pacific, Gulf, and Atlantic Coasts to encourage traffic to move over their lines.

The use of jumbo-size hopper cars for grain and other bulk commodities has enabled the railroads to reduce their charges, especially when single shipments of several cars at one time have been likely. During 1962, the railroads handled a smaller share of the Nation's total intercity traffic than ever before, and the trend continues. But the volume of farm products handled by railroads has held at about the same level for several years. Piggyback traffic has continued to grow, but the volume of this traffic in 1963 was less than 3 percent of all carload traffic.

#### Highlights of Special Articles

Short-term changes in live cattle prices explain most of the month-to-month change in the spread between the retail price and farm value of Choice beef from 1954 to 1963. They did not, however, explain the increasing long-term trend. Of the 12 cent increase in the farm-retail spread during this period, 9 cents was in the retailer's spread. Operating expenses of retailers increased during this period and their profits (after taxes) were relatively stable at around 1 cent per dollar of sales.

It appears that beef now carries a larger share of the retailer's overhead than it did 10 years earlier. The increase in the spread for beef during this period was 50 percent compared with an average increase for all food products of 21 percent. (Price Spreads for Beef, p. 14).

Researchers in USDA's Economic Research Service observed the shopping behavior of customers in 3 retail food stores with modified floor plans and in 3 with traditional layouts. In the modified layouts tested, some perishable-food departments were located about in the center of the store's selling area, and dry groceries were moved to either side.

The traditional layouts, with dry groceries in the center and perishable foods around the sides, resulted in more purchases by customers than the modified layouts.

Percentages of customers entering various food departments were about equal in both types of layout. However, customers in traditional-layout stores shopped more of the total selling area and of each department than customers in the modified-layout stores.

The study indicates that, irrespective of store layout, customers are drawn to certain frequently purchased items wherever they are located. Congestion in some parts of the store can be reduced by moving these items elsewhere. (Shopping Behavior of Customers in Modified and Conventional Layouts of Retail Food Stores, p. 21.)

Raw cotton produced in the United States, except that destined for the ports of California, New Orleans, and Texas, generally moves eastward across the Cotton Belt. While cotton may stop many times en route, its eventual destination is mainly in the Southeast, where domestic mills are concentrated.

A survey of most U.S. cotton warehouses showed that about 57 percent of the cotton shipped in 1961-62 was destined to the Southeast and 29 percent went to

ports. The remaining 14 percent was distributed among various destinations including Canada, the Northeastern United States, and interior concentration points.

Principal shipments from the West were distributed about 45 percent to the Southeast and 42 percent to ports in California and Texas. Comparable major movement statistics for other producing regions were: Southwest, 31 percent to the Southeast and 56 percent to Texas ports; South Central, 70 percent to the Southeast and 9 percent to the port of New Orleans; Southeast, 92 percent within the region and 1 percent to local ports.

Shipments to Canada, the Northeast, and interior concentration points were heaviest in the South Central region.

Railroads continued to dominate the transporting of U.S. cotton, particularly on those movements from the more distant producing areas to the consuming centers and ports. Motortrucks were employed mainly for the short haul movements within the Southeast; from the South Central region to the Southeast and to the port of New Orleans; and to ports in California and Texas. (The Traffic Pattern of Raw Cotton Shipped From Warehouses in the United States, 1961-62, p. 29).

## FARM-RETAIL SPREADS FOR FARM-FOOD PRODUCTS

### Little Change in Marketing Charges

The spread between the retail cost and farm value of the market basket of farm-originated food products averaged \$683 (annual rate) in the first quarter of 1964, about the same as in the fourth quarter last year.<sup>1/</sup> The change in the farm-retail spread of each major product group was small (table 2).

The market basket farm-retail spread also was about the same in the first quarter as in the like quarter of 1963. Increases for miscellaneous products, dairy products, and poultry and eggs were about offset by a decrease for meat products. Changes for other product groups were negligible (table 17, p. 39).

Since large increases in January and

February of 1963, changes in the market basket farm-retail spread have been relatively small (table 1).

### Small Rise in Farm Value

The total farm value of the products in the farm-food market basket averaged \$395 (annual rate) in the first quarter this year, up 1 percent from the preceding quarter. The fruits and vegetables group accounted for most of the increase. Farm values of processed orange products and most fresh vegetables were up sharply.

Although the market basket farm value averaged slightly higher in the first quarter than in the preceding quarter, it was 1 percent lower than a year earlier. The farm value of the meat products group

<sup>1/</sup> The "market basket" contains the average quantities of domestic farm-originated food products purchased per family in 1952 for consumption at home by urban wage-earner and clerical-worker families. Additional information concerning contents of the market basket and methods of estimating market-basket data is in Farm-Retail Spreads for Food Products, USDA Misc. Pub. 741, Nov. 1957. Since the market basket does not contain imported foods, fishery products, or the cost of meals in eating places, its retail cost is less than the cost of all foods bought per family. The farm value is the return to farmers for the fixed quantity of farm products equivalent to the foods in the market basket. The farm-retail spread is the difference between the retail cost and farm value. It is an estimate of the charges made by marketing firms for assembling, processing, transporting, and distributing the products in the market basket.

Table 1---The farm food market basket: Retail cost, farm value, farm-retail spread, and farmer's share of retail cost, 1952-64 1/

Year and month	Retail cost	Farm value	Farm-retail spread	Farmer's share
	2/	3/	Dollars	Percent
1952 .....	1,034	482	552	47
1953 .....	1,003	445	558	44
1954 .....	986	421	565	43
1955 .....	969	395	574	41
1956 .....	972	390	582	40
1957 .....	1,007	401	606	40
1958 .....	1,064	430	634	40
1959 .....	1,040	398	642	38
1957-59 average .....	1,037	410	627	40
1960 .....	1,053	407	646	39
1961 .....	1,060	406	654	38
1962 .....	1,068	409	659	38
1963 4/ .....	1,078	394	684	37
1963				
January .....	1,078	408	670	38
February .....	1,084	398	686	37
March .....	1,079	392	687	36
April .....	1,071	391	680	37
May .....	1,069	385	684	36
June .....	1,075	390	685	36
July .....	1,088	403	685	37
August .....	1,090	397	693	36
September .....	1,082	390	692	36
October .....	1,075	392	683	37
November .....	1,074	395	679	37
December .....	1,076	384	692	36
1964				
January .....	1,079	398	681	37
February .....	1,079	393	686	36
March .....	1,076	395	681	37

1/ The farmer's share and index numbers of the retail cost, farm value, and farm-retail spread for the years 1913-62 (1957-59=100) are published in the February 1962 Marketing and Transportation Situation (MTS-144) p. 50.

2/ Retail cost of average quantities purchased per family in 1952 by urban wage-earner and clerical worker families, calculated from retail prices collected by the Bur. Labor Statistics.

3/ Payment to farmers for equivalent quantities of farm produce minus imputed value of byproducts obtained in processing.

4/ Preliminary estimates.

: Current data are given in the Statistical Summary, :  
 : a monthly publication of the Statistical Reporting Service :  
 :

Table 2 .--The market basket of farm foods: Retail cost, farm value, farm-retail spread, January-March 1964 and October-December 1963

Item	Jan.-Mar.	Oct.-Dec.	Change - Jan.-Mar. 1964 from Oct.-Dec. 1963	
	1964	1963	Actual	Percentage
	Dollars	Dollars	Dollars	Percent
	<hr/>			
			<hr/> <b>Retail cost</b> <hr/>	
Market basket .....	1,078.03	1,075.17	2.86	1/
Meat products .....	271.10	276.24	-5.14	-2
Dairy products .....	201.69	201.50	-.19	1/
Poultry and eggs .....	87.99	87.70	.29	1/
Bakery and cereal products ....	172.54	172.66	-.12	1/
All fruits and vegetables ....	254.38	247.84	6.54	3
Fats and oils .....	42.11	41.89	.22	1
Miscellaneous products .....	48.22	47.34	.88	2
			<hr/> <b>Farm value</b> <hr/>	
Market basket .....	395.46	390.55	4.91	1
Meat products .....	123.63	127.30	-3.67	-3
Dairy products .....	89.12	89.43	-.31	1/
Poultry and eggs .....	52.53	52.00	.53	1
Bakery and cereal products ....	30.85	30.68	.17	1
All fruits and vegetables ....	80.32	71.89	8.43	12
Fats and oils .....	10.98	11.47	-.49	-4
Miscellaneous products .....	8.03	7.78	.25	3
			<hr/> <b>Farm-retail spread</b> <hr/>	
Market basket .....	682.57	684.62	-2.05	1/
Meat products .....	147.47	148.94	-1.47	-1
Dairy products .....	112.57	112.07	.50	1/
Poultry and eggs .....	35.46	35.70	-.24	-1
Bakery and cereal products ....	141.69	141.98	-.29	1/
All fruits and vegetables ....	174.06	175.95	-1.89	-1
Fats and oils .....	31.13	30.42	.71	2
Miscellaneous products .....	40.19	39.56	.63	2
			<hr/> <b>Farmer's share of retail cost</b> <hr/>	
	<u>Percent</u>	<u>Percent</u>	<u>Percentage point</u>	
Market basket .....	37	36	1	
Meat products .....	46	46	0	
Dairy products .....	44	44	0	
Poultry and eggs .....	60	59	1	
Bakery and cereal products ....	18	18	0	
All fruits and vegetables ....	32	29	3	
Fats and oils .....	26	27	-1	
Miscellaneous products .....	17	16	1	

1/ Less than 0.5 percent.

was down 8 percent from the first quarter 1963. Several other product groups showed decreases. The fruits and vegetables group, however, was 12 percent higher than in January-March 1963.

#### Retail Cost Steady

The slight rise in the farm value of the market basket foods and the negligible change in the farm-retail spread accompanied a stable retail cost. At an average annual rate of \$1,078 in January-March this year, it was about the same as in the previous quarter and in the first quarter of 1963. This stability, however, resulted only from a decrease in the retail cost of the meat products group which offset increases for most other product groups (table 2).

#### Farmer's Share Averages 37 Cents

Farmers received an average of 37 cents of the dollar consumers spent in retail food stores for farm-originated foods in the quarter just ended, 1 cent more than in the previous quarter and the same share as in the first quarter last year. <sup>2/</sup> During the preceding 10 years, the quarterly average farmer's share varied from 36 cents in the second and fourth quarter of 1963 to 44 cents in the first quarter of 1954.

#### Farm Value of Choice Beef Down from Year Earlier

The farm value of Choice beef decreased to 41.3 cents per retail pound in the first quarter this year from 43.7 cents in the final quarter of 1963 (table 3). This decline was about the usual seasonal movement. The first quarter farm value, however, was 6.3 cents lower than a year earlier. Beef production probably was 10 percent larger than in the first quarter last year.

<sup>2/</sup> This estimate of the farmer's share does not account for Government payments to producers.

The farm-retail spread increased slightly in the quarter just ended, so the retail price of beef did not decrease as much as the farm value. The retail price averaged 78.0 cents per pound in the first quarter, down 2.0 cents from the previous quarter and 6.5 cents from the first quarter 1963. The farm-retail spread in the quarter just ended averaged about the same as in the first quarter of 1963. A decrease of 3 percent in the wholesale-retail segment of the spread was about offset by an increase in the farm-wholesale segment.

#### Pork--Retail Price, Farm Value, and Spread Decrease

The retail price of pork averaged 56.1 cents per pound in the first quarter this year, down 0.9 cent from the previous quarter and 1.6 cents from the first quarter of 1963 (table 3). Most of the decrease from the previous quarter and two-thirds of that from the first quarter 1963 resulted from decreases in the farm-retail spread. Both the wholesale-retail and farm-wholesale segments of the farm-retail spread decreased from the fourth quarter last year; but all of the decrease from the first quarter was in the wholesale-retail segment, since the farm-wholesale segment increased slightly. The farm value was down 0.1 cent from the previous quarter and 0.5 cent (2 percent) from January-March 1963. Pork production was about 5 percent larger in the first quarter this year than in the same quarter of 1963.

#### Prices of Fresh Vegetables Rise

Prices received by farmers for most of the fresh vegetables in the market basket were considerably higher in the first quarter this year than in the previous 3 months because of reduced supplies (table 16, p. 38). Supplies of some of these products were curtailed by frost

Table 3.--Beef, pork, and lamb: Retail price, wholesale value, farm value, farm-retail spread, and farmer's share of retail price by quarters, 1963-64

Date	Retail price: Wholesale per pound 1/		Gross farm value 3/	Byproduct allowance 4/	Net farm value 5/	Total	Wholesale retail	Farm- wholesale	Farm- retail spread	Farmer's share
	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Percent	
Beef, (Choice grade) 6/										
<u>1963</u>										
Jan.-Mar. ....	84.5	58.2	51.7	4.1	47.6	36.9	26.3	10.6	56	
Apr.-June ....	79.1	54.6	47.2	3.9	43.3	35.8	24.5	11.3	55	
July-Sept. ....	80.4	57.4	50.8	4.1	46.7	33.7	23.0	10.7	58	
Oct.-Dec. ....	80.0	54.2	47.7	4.0	43.7	36.3	25.8	10.5	55	
<u>1964</u>										
Jan.-Mar. ....	78.0	52.6	44.9	3.6	41.3	36.7	25.4	11.3	53	
Apr.-June ....										
July-Sept. ....										
Oct.-Dec. ....										
Pork, (retail cuts) 6/										
<u>1963</u>										
Jan.-Mar. ....	57.7	39.2	31.8	4.2	27.6	30.1	18.5	11.6	48	
Apr.-June ....	55.5	39.0	32.2	3.9	28.3	27.2	16.5	10.7	51	
July-Sept. ....	59.6	43.4	36.3	4.3	32.0	27.6	16.2	11.4	54	
Oct.-Dec. ....	57.0	39.6	31.3	4.1	27.2	29.8	17.4	12.4	48	
<u>1964</u>										
Jan.-Mar. ....	56.1	38.9	31.1	4.0	27.1	29.0	17.2	11.8	48	
Apr.-June ....										
July-Sept. ....										
Oct.-Dec. ....										
Lamb, (Choice grade) 6/										
<u>1963</u>										
Jan.-Mar. ....	72.2	44.7	43.0	7.0	36.0	36.2	27.5	8.7	50	
Apr.-June ....	73.0	50.3	45.1	6.1	39.0	34.0	22.7	11.3	53	
July-Sept. ....	73.1	48.7	43.2	5.7	37.5	35.6	24.4	11.2	51	
Oct.-Dec. ....	71.9	45.8	41.3	7.3	34.0	37.9	26.1	11.8	47	
<u>1964</u>										
Jan.-Mar. ....	73.9	46.5	45.2	7.4	37.8	36.1	27.4	8.7	51	
Apr.-June ....										
July-Sept. ....										
Oct.-Dec. ....										

1/ Estimated weighted average price of retail cuts.

2/ Wholesale value of quantity of carcass equivalent to 1 lb. of retail cuts: Beef, 1.35 lb.; pork, 1.00 lb.; lamb, 1.11 lb.

3/ Payment to farmer for quantity of live animal equivalent to 1 lb. of retail cuts: Beef, 2.25 lb.; pork, 2.13 lb.; lamb, quantity varies by months from 2.28 lb. in June to 2.42 lb. in March.

4/ Portion of gross farm value attributed to edible and inedible byproduct.

5/ Gross farm value minus byproduct allowance.

6/ Gross and net farm values, farm-retail spread, and farm-wholesale spread have been revised. Byproduct adjustments for beef have been revised for most quarters.

Data for earlier years were published in the Marketing and Transportation Situation, May 1962, (MTS-145).

damage. Many prices also were higher than a year earlier. Farm-retail spreads generally were wider than in the fourth quarter, but many were narrower than in the first quarter last year (table 17, p. 39). The total spread for all fresh vegetables in the market basket was about 2 percent smaller than a year earlier.

#### Sharp Increase in Farm Values of Processed Orange Products

In the first quarter the farm value of frozen orange juice concentrate (based partly on prices of oranges from the 1963-64 crop and partly on those from the previous crop) averaged 45 percent higher than in the final quarter last year (which was based entirely on the average price received by growers for the 1962-63 crop). A large part of the 1962-63 crop used for frozen concentrate was sold before much of the rise in grower prices that came later in the season. The retail price of frozen concentrate was a little higher in the first

quarter than in the fourth. But the increased was not as large as that in the farm value, so that farm-retail spread decreased 17 percent. The spread in January-March this year averaged 1 percent wider than in the same months of 1963 (tables 16 and 17, pp. 38 and 39).

The farm value of canned orange juice in the first quarter this year, based mainly on prices received for 1963-64 crop oranges, was more than twice as large as the fourth quarter average, which was based entirely on the average price for the 1962-63 crop. A large part of the 1962-63 oranges used for canned juice were frost-damaged and were sold soon after the December freeze when prices were depressed. The retail price continued to rise in the first quarter this year. The increase, however, was not as large as that in the farm value, since the farm-retail spread decreased 24 percent. The spread in the first quarter this year was 11 percent smaller than in the like period of 1963.

#### NET INCOME OF LEADING FIRMS MARKETING FARM PRODUCTS, 1962 AND 1963

Net income (net profits after taxes on income) of 166 leading food manufacturing corporations totaled 8 percent more in 1963 than in 1962, according to data compiled by the First National City Bank of New York (table 4). Much of the increase resulted from increased sales.

Net income as a percentage of sales was the same or higher than in 1962 for leading firms in each of the individual food manufacturing industries. Only the 17 sugar processing firms, however, had an average increase of more than 0.1 percentage point. Net income of these firms averaged 4.3 percent of sales, up from 3.6 percent in 1962. For other individual industries, net-income-to-sales ratios ranged from 0.7 percent for meatpacking firms to 4.2 percent for manufacturers of "other food products."

Net income as a percentage of net

assets (also known as stockholders' equity) was higher in 1963 than in 1962 for leading firms in 4 of the 5 food manufacturing industries. Only the "other food products" group had a decrease--from 12.5 percent to 12.3 percent. Among the other industry groups, net income-to-net asset ratios varied in 1963 from 5.9 percent for meatpacking corporations to 11.0 percent for baking corporations.

Other industries processing farm products also had higher total net incomes in 1963 than in 1962. Net income as a percentage of sales likewise was as high in 1963 as in 1962 or higher for each of these industries. The ratio of net income to net assets was higher in 1963 than in 1962 for brewing and distilling, but it was lower for the tobacco industry and the clothing and apparel industry. For the textile products industry, the ratio was the same in both years.

Table 4.--Net income of leading corporations marketing agricultural products 1963 and 1962

Industrial groups	Number of corpo- rations	Reported net income after taxes					
		Total		As percentage of net assets		As percentage of sales	
		1963	1962	1963	1962	1963	1962
		1,000 dol.	1,000 dol.	Pct.	Pct.	Pct.	Pct.
Manufacturing:							
Food--							
Baking .....	18	68,152	63,781	11.0	9.9	3.0	2.9
Dairy products ..	11	125,189	115,571	10.8	10.5	2.7	2.6
Meatpacking .....	28	60,372	57,828	5.9	5.7	.7	.7
Sugar .....	17	65,309	47,507	10.4	7.8	4.3	3.6
Other food products .....	92	472,823	448,799	12.3	12.5	4.2	4.2
Total .....	166	791,845	733,486	---	---	---	---
Other--							
Brewing .....	14	47,985	44,371	9.2	8.9	4.3	4.3
Distilling .....	14	122,306	114,893	8.0	7.8	4.0	3.9
Tobacco products..	14	293,475	283,862	13.9	14.2	6.1	6.0
Textile products..	65	170,545	164,425	7.2	7.2	3.0	3.0
Clothing and apparel .....	92	95,932	89,093	11.8	12.0	3.6	3.6
Distributing:							
Chain food stores .....	59	268,860	254,405	11.5	11.5	1.2	1.2
Department and specialty stores..	85	252,075	250,855	9.1	9.5	2.3	2.4

1/ Book net assets at the beginning of the year are based on the excess of total balance-sheet assets over liabilities.

2/ Includes income from investments and other sources as well as from sales.

Compiled from "Monthly Economic Letter," published by The First National City Bank, New York, April 1964.

Total profits of 59 leading retail food chain companies were 6 percent more in 1963 than in the preceding year, although the ratios of net income to sales and to net assets were the same for both years.

## TRANSPORTATION DEVELOPMENTS

Nineteen sixty-three was another year of important changes in transportation of farm products. For the most part, these changes would reduce marketing costs. Competition among carriers for business was keener than ever before, and it tended to hold shippers' charges down and, in some important instances, to reduce them. Carriers' charges generally tended to shift in the direction of their costs of providing particular services.

### Rail Rate Reductions

Rail carriers offered shippers new specialized equipment and, in many instances, initiated new lower rates for such equipment, particularly when shipments involved the movement of several cars at one time. A favorable feature of these innovations was that they not only helped shippers hold down their freight charges but also helped carriers hold down their expenses. Lower freight charges probably were passed onto farmers and consumers.

Reductions in rail freight rates on grains continued during 1962; further adjustments probably reduced grain rates again in 1963. These reductions continued a down trend that started 4 or 5 years ago. Rate reductions applied particularly to wheat and corn moving from major production areas to Atlantic and Pacific Coast export points. Railroads servicing these ports have made these rate adjustments to combat the tendency for more and more grain to move from production points by inland waterways to ports on the Gulf Coast and the Great Lakes for ultimate foreign destinations.

These reduced rail freight rates are indicative of major developments in transportation. One is the growing competition among the carriers for traffic requiring customary services, and another is the railroads' recent practice of offering minimum point-to-point transportation at reduced rates. For example, Southern Railway reduced its rates by as much as 60 percent for moving grain from

Ohio and Mississippi River grain-loading points to destinations on its lines in Southeastern States. Truck and barge competition forced these adjustments. These reduced rates, however, apply only to direct movement from origin to destination without intermediate stops for storage, inspection, or milling; also, shippers are required to load cars at origin and unload them at destination in 24 hours rather than in the 2 days customary in the past. The reduced rates apply only on shipments of 450 tons moving in new double-size "jumbo" covered-hopper cars. Other railroads in the South are offering shippers the same lower rates for the same size shipments, but in standard boxcars.

### Competition Among Carriers

Despite some individual successes by railroads in attracting traffic from highway and waterway carriers, traffic volume trends indicate that the railroads in 1963 hauled a smaller portion of the Nation's total intercity freight traffic than ever before. In terms of ton-miles, the railroads moved 43 percent of the combined rail, highway, waterway, pipeline, and airway business in 1962. In 1939, the comparable figure was 62 percent. Piggy-back loadings continued growing rapidly, but such shipments still constitute less than 3 percent of all rail carload traffic. The movement of an increasing volume of fresh vegetables and citrus fruits from Florida to eastern seaboard metropolitan areas is by piggyback. It provides shippers with attractive rates and services; it is able to do so by combining the economies of low-cost longhaul rail transportation and the geographical flexibilities of trucks achieved by part-load pickups and part-load deliveries.

Railroads also are attempting to minimize the sharing of manufactured goods traffic with over-the-road motortrucks by revising their all-rail tariffs. Revisions are being made to allow shippers to load rail boxcars with whatever items they

choose, rather than restricting loads to a limited number of items in accordance with the railroads customary "mixture rules." This effort to attract traffic has so intensified competition that motor-truckers are attacking, in the U.S. Supreme Court, the railroads' use of this technique.

Highway carriers in 1963 continued to increase their share--approximately 25 percent in terms of ton-miles--of the Nation's freight traffic. Movements over inland waterways and through pipelines (in terms of the share of the Nation's total intercity traffic) have not changed notable in recent years. Airway freight increased sharply in percentage terms, but its share was still small--less than 1 percent of all traffic.

The Railroads' failure to increase shipments in line with other carriers puts them in a particularly unfavorable position, because their capacity to haul traffic has increased. Their larger hauling capacity has resulted from such technological changes as centralized traffic control, automated freight yards, and longer trains. Railroads need more traffic to be profitable. They do not have enough of it to maximize their efficiency. In addition, the railroads' traffic tends to be made up increasingly of low-value products, which are hauled for low freight rates and yield low earnings. Motor carriers, on the other hand, continue to attract the more profitable high-value traffic. Despite increasing competition among themselves, the more aggressive truck operators are expanding their operations.

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## PRICE SPREADS FOR BEEF 1/

The period since World War II has been one of the most dynamic in the history of the cattle industry. Basic to this has been the increasing ability and willingness of U.S. consumers to buy beef. Cattle producers have marketed younger, higher quality, more uniform animals and have grain-fed an increasing proportion of the cattle slaughtered. Consumers with rapidly increasing incomes have developed a growing taste for beef to barbecue, grill, and roast. Per capita consumption of beef last year was an alltime high of 95 pounds, up more than 50 percent from the 63 pounds consumed in 1950. It is astonishing to note that consumer demand for beef increased sufficiently during this period to allow this increase in consumption to take place at relatively stable retail prices. From 1958 to 1962, for example, per capita consumption increased from 80.5 pounds to 89.1. During the same period, retail prices remained about 81 cents per pound. It was not until beef supplies per capita increased very sharply in 1963 (about 7 percent) that retailers had to lower prices in order to move all the beef produced.

These changes have affected the various segments of the livestock-meat economy very differently. In 1954, for example, a farmer who sold a 1,000-pound Choice steer got about \$237 at a central market. The packer who butchered the steer received about \$263 for the carcass and salable byproducts, leaving him \$26 to cover his expenses of slaughtering, cooling the carcass, and delivering it to the retailer's warehouse. The retailer paid almost \$242 for the carcass and sold about \$313 worth of cuts of beef and about \$1.43 worth of bone and suet, leaving him around \$72 to cover his costs of cutting, packaging, and merchandising.

In 1963, a 1,000-pound steer of the same quality brought the farmer about \$237.50, 50 cents more than in 1954. The packer and the retailer got about \$7 and \$39 more, respectively, to cover their expenses.

These data show that returns from the sale of beef are being divided differently today than they were 10 years ago. For example, in 1954 the farmer got 65 cents of each dollar consumers spent for beef, but in 1963 he got only 56 cents. The spread between beef and cattle prices increased 12 cents from 1954 through 1963, to a record high of 35.7 cents.<sup>2/</sup> Of this increase of 12 cents, the retailer got 9 cents and the packer about 3 cents.

The purpose of this article is to place both short and long-term changes in cattle and beef prices in perspective and to discuss the trend observed in these prices and the spread between them.

### Cattle and Beef Price Changes

Cattle and beef prices usually move together although there often is a lag. (See chart on cover.) For every decrease in the cattle price a decrease in the price of beef follows; every increase in cattle price means an increase in beef price. Also, changes in cattle prices precede changes in retail prices. Each peak and valley in the cattle price occurs about a month earlier than the associated peak or valley in the retail price. One other aspect of price performance stands out sharply. The difference between the prices of beef and cattle is much greater now than in 1954, the result of a widening trend during the period.

<sup>1/</sup> By William C. Motes, Bruce Bullock, and Duane Hacklander, agricultural economists, Marketing Economics Division, Economic Research Service, USDA.

<sup>2/</sup> The farm-retail spread is the difference between the retail price per pound of Choice beef and the return to the farmer for the equivalent quantity of live cattle, less the value of the byproducts. In this article, this spread is called the spread between the beef price and the cattle price.

## Changes in Prices and Spreads

The spread between cattle and beef prices exhibits 2 types of movement: A persistent upward trend and short-term month-to-month changes (fig. 1). The result is a jagged line slanting upward at the rate of slightly more than a penny a year between 1954 and 1964, with variations around this trend of as much as 10 cents in a 6-month period. It is important to separate these 2 movements to evaluate price performance.

The short-term changes in the spread are quite closely associated with month-to-month changes in cattle prices. When prices are responding to changes in supply, the 1-month lag between changes in cattle and beef prices causes the price spread to be a comparison between a cattle price that is adjusting to the supply change and a beef price that has not yet reacted to

this change. By the time the impact of a given supply change is felt at retail, cattle prices may be responding to a later supply change. Thus, in the very short run, spreads are influenced heavily by changes in cattle prices. Monthly price spreads tend to widen as cattle prices fall and narrow as cattle prices rise.

The lag between cattle and beef price changes and its consequent impact on the spread is observed both when prices are rising and when they are falling (table 5). This pattern is typical and has been observed as long as price spreads have been computed. Its cause appears to be mainly the length of time required for a change in supply to move from live level to the retail level in the marketing channel. Other factors may be important, also, including the preference retailers have shown for stable regular prices and their dependence on special

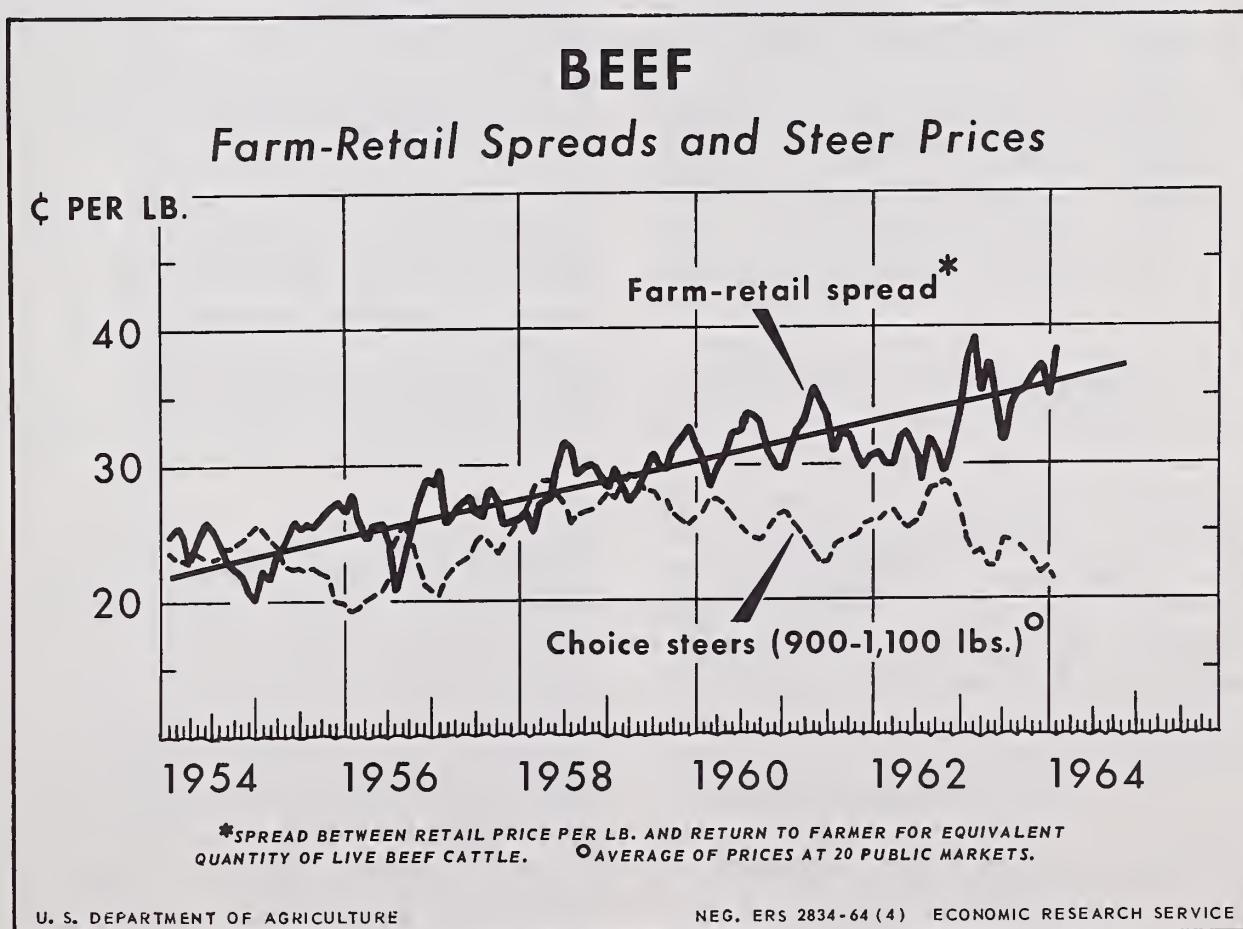


Figure 1

Table 5.--Change in retail price of Choice-grade beef per pound and in value of equivalent live product, 1954-63

	Beef 1/		Live product equivalent 2/		Lag in retail price at beginning and end of period	
			Beginning	End	Beginning	End
Periods of increasing prices						
			Cents		Months	
Apr.	1954 - Jan.	1955	2.8	Mar.	1954 - Jan.	1955
Mar.	1956 - Oct.	1956	12.1	Feb.	1956 - Sept.	1956
Mar.	1957 - Sept.	1957	8.2	Feb.	1957 - Aug.	1957
Nov.	1957 - June	1958	10.6	Oct.	1957 - Apr.	1958
Sept.	1958 - May	1959	3.3	Aug.	1958 - Apr.	1959
Feb.	1960 - Apr.	1960	1.6	Dec.	1959 - Apr.	1960
Oct.	1960 - Jan.	1961	2.5	Oct.	1960 - Jan.	1961
July	1961 - Apr.	1962	4.8	June	1961 - Apr.	1962
June	1962 - Dec.	1962	6.0	June	1962 - Nov.	1962
June	1963 - Aug.	1963	3.2	May	1963 - July	1963
Average			5.5			8.0
						0.7
Periods of decreasing prices						
			Cents		Months	
Jan.	1955 - Mar.	1956	-9.3	Jan.	1955 - Feb.	1956
Oct.	1956 - Mar.	1957	-7.2	Sept.	1956 - Feb.	1957
Sept.	1957 - Nov.	1957	-1.5	Aug.	1957 - Oct.	1957
June	1958 - Sept.	1958	-2.6	Apr.	1958 - Aug.	1958
May	1959 - Feb.	1960	-2.7	Apr.	1959 - Dec.	1959
Apr.	1960 - Oct.	1960	-3.0	Apr.	1960 - Oct.	1960
Jan.	1961 - July	1961	-5.8	Jan.	1961 - June	1961
Apr.	1962 - June	1962	-1.3	Apr.	1962 - June	1962
Dec.	1962 - June	1963	-7.7	Nov.	1962 - May	1963
Aug.	1963 - Jan.	1964	-3.5	July	1963 - Dec.	1963
Average			-4.5			-8.1
						0.7

1/ Changes in weighted average retail price calculated from monthly prices of individual cuts published by the Bureau of Labor Statistics.

2/ Changes in value of equivalent quantity of Choice steer, calculated from average prices of steers (900-1, 100 lb.) at 20 leading public stockyards. Because of increased boning and trimming of retail cuts the equivalent quantity increased from 2.19 lb. in 1954 to 2.25 lb. in 1960 and later years.

sales to move increases in supply that may be of short duration.<sup>3/</sup>

The short-run lag in retail price responses, in combination with changes in cattle prices, appears to explain a large proportion of the month-to-month changes in the price spread, but not the long-run trend. As the price spread moved up and down in the 1954-63 period, it usually did not go quite as far down as it had gone up. The result was an upward trend not explained by changes in cattle prices, which had a definite long-term pattern of nearly equal up and down movements.

### Evaluating Price Spreads

In our free market, we expect important changes in supply to cause changes in price at the live, wholesale, and retail levels, since the demand for meats is fairly constant in the very short run. Although this basic assumption means that prices should change in response to short-run supply changes, it does not indicate how much of a price change to expect at each level when changes occur in cattle and beef production, and it does not say how soon these changes should occur.

Retail beef price adjustments have lagged behind changes in cattle prices in the recent period (1963-64) of supply changes. This typical pattern appears to result from traditional pricing policies of retailers. The implications of the long-term increases in the spread between cattle and beef prices are much less certain.

The relevant question is, how much of the \$7 and \$39 increase from 1954-63 in the packer and retailer share of the value of a 1,000-pound steer was needed to cover increased expenses? Operating expenses both for packers and retailers appear to have gone up more rapidly than productivity, so that it costs more to handle a pound of beef in 1963 than in

1954. In 1963, more beef cuts were prepackaged than in 1954. Retailers seem to be trimming beef more closely now and more of it is sold in boneless cuts than in 1954. Each of these changes represents a change in the quality of the product and a change in the cost. Furthermore, both the packer and retailer now pay considerably more for their labor per hour than they did in 1954--probably 40 to 50 percent more. However, they probably use 10 to 15 percent less labor and correspondingly more equipment, which also costs more now than it did in 1954. Packers and retailers are more efficient today than they were 10 years ago and are thus able to offset at least part of the increase in their costs by more efficiently located, organized, and equipped packing plants and retail stores.

The opposite impacts of increasing efficiency and increasing costs leave unanswered the question of how increased expenses for packing plants and retail stores compare with increased returns to packers and retailers for handling a pound of beef. The farm-retail spread for Choice beef has been increasing much more rapidly than the consumer price index, an indicator of the value of the dollar (table 6). Since 1959 the spread for beef has been increasing much faster than spreads for other meats and the average spread for all foods.

Despite increases in the marketer's share of the retail price of beef, overall profits per dollar of total sales reported by packers and retailers have not been large in recent years. Profits per dollar of sales have changed considerably from year to year, but data for the last 15 years show no significant trend. Although some firms have reported higher than average profits per dollar of sales, the averages for both packers and retailers for the last few years have been in the low range compared to other industries.

Does this picture of increasing costs

<sup>3/</sup> For more complete discussion of this point, see Adjustments in Retail Prices of Beef to Supply Changes, ERS 123, U.S. Dept. Agr., May 1963.

Table 6.--Indexes of farm-retail spreads for beef, pork, lamb and for all farm foods and consumer price index, 1954-63

Year	(1957-59=100)					Consumer price index 2/	
	Farm-retail spreads 1/						
	Beef	Pork	Lamb	All farm foods			
1954	83.2	84.4	90.8	89.9	93.6		
1955	86.0	90.8	88.9	91.6	93.3		
1956	88.8	88.3	89.2	92.8	94.7		
1957	94.7	95.7	94.3	96.6	98.0		
1958	100.4	98.9	101.0	101.1	100.7		
1959	104.6	105.7	104.8	102.3	101.5		
1960	109.8	96.8	104.1	102.9	103.1		
1961	113.0	98.2	106.3	104.3	104.2		
1962	107.4	99.6	111.7	104.9	105.4		
1963	125.3	101.8	114.3	109.1	106.7		

1/ From market basket of farm foods, Economic Research Service, USDA.

2/ Bureau of Labor Statistics.

and relatively steady levels of profits mean that the increase in the spread of 12 cents per retail pound between 1954 and 1963 has been necessary to meet the increases in costs of retailers and packers? Not necessarily, because it is quite possible that spreads for beef could widen a great deal at the same time profits were steady or even decreasing. This is particularly true for retailers, who have accounted for three-fourths of this increase because they sell many different commodities (table 7). Beef is only one of the several thousand items retailers carry. For each item he sells, the retailer must estimate the price that will either yield a profit or attract customers to buy other items that are priced to yield a profit. In arriving at the "best" price for each item, the retailer takes into account consumer demand, the supply and price in the wholesale market, and the costs of handling and merchandising. Demand changes slowly, but it has been undergoing changes favorable to beef in recent years. Supply and price may change rapidly, and when they do, the retailer must be alert so that he can offer bargains that are at least as attractive as those offered by competitors. Experience leads retailers to a set of

pricing rules designed to maximize store profits. These rules make up each firm's pricing policy. It is this policy that determines how much margin an item will carry under varying circumstances.

The problem of how much of the overhead each commodity should bear is of constant concern to retailers and all other businessmen who sell more than one product. Today's retailer usually is not able to have each item he sells bear the same proportion of the overhead that it makes up of sales. He is constantly experimenting to determine how individual price changes affect total sales and profits. Retailers' prices and pricing patterns are well known in the trade. Since they buy in the same wholesale market, the prices paid are common knowledge, so pricing policies are not secrets for long. When a successful retailer uses a new policy, other firms try it soon. It appears that beef is carrying a larger proportion of the retail overhead cost now than 10 years ago, while pork is among those commodities that may be carrying less (fig. 2).

If retailers' and meatpackers' price spreads widen, demand at the farm level

Table 7.--Marketing spreads for Choice grade beef, 1954-63

Year	Farm-retail spread 1/					
	Total		Wholesale-retail		Farm-wholesale	
	Cents	1957-59=100	Cents	1957-59=100	Cents	1957-59=100
1954 .....	23.7	83.2	15.9	82.0	7.8	85.7
1955 .....	24.5	86.0	16.1	83.0	8.4	92.3
1956 .....	25.3	88.8	16.5	85.1	8.8	96.7
1957 .....	27.0	94.7	17.8	91.8	9.2	101.1
1958 .....	28.6	100.4	19.9	102.6	8.7	95.6
1959 .....	29.8	104.6	20.4	105.2	9.4	103.3
1960 .....	31.3	109.8	20.9	107.7	10.4	114.3
1961 .....	32.2	113.0	22.6	116.5	9.6	105.5
1962 .....	30.6	107.4	21.2	109.3	9.4	103.3
1963 .....	35.7	125.3	24.9	128.4	10.8	118.7

1/ From market basket of farm foods, Economic Research Service, USDA.

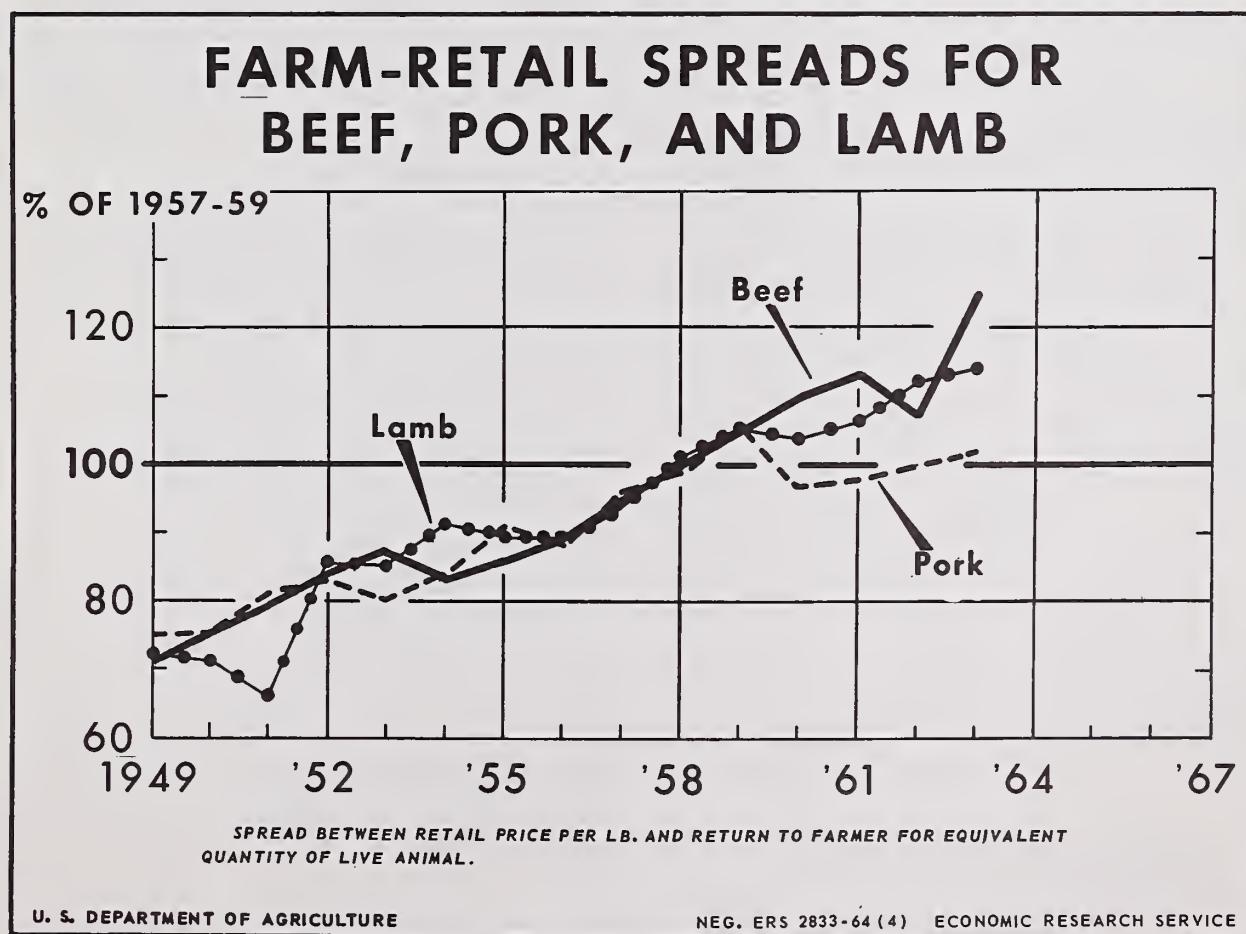


Figure 2

may be reduced. In the post-World War II period, the demand for cattle has increased less than the retail demand for beef. The major part of the difference in rates of increase was due to the upward trend in the farm-retail price spread.

Changes in the share of the overhead load assigned to commodities are not evidence that retailers are able to ignore competition in planning their reactions to changes in supply and demand. They do mean that retailers are able to adjust their pricing policies as changes occur in the relative ability of commodities to contribute to overhead.

In interpreting supply and demand and determining price, retail management today is more sensitive to changes in demand and supply than were retailers before the advent and rapid growth of the retail chain. They are more conscious of the impact of pricing policies

on their profits. They have better control of their operations and are better able to implement policies that will improve their profits. As retailers become more sophisticated and more diversified businessmen, changes in pricing policies would be expected as economic circumstances change--as they have since World War II.

These changes cannot be expected to affect all farm commodities equally. First of all, some commodities may have been carrying too much overhead. Second, the profit motive plays an important role in decision-making. What our system asks of entrepreneurs at all market levels is that they compete effectively. This is expected to promote progress and efficiency in distribution. As these developments continue, increases in price spreads would be expected to be limited to increases in costs of handling, processing, and merchandising.

SHOPPING BEHAVIOR OF CUSTOMERS IN MODIFIED AND CONVENTIONAL  
LAYOUTS OF RETAIL FOOD STORES 1/

The past 3 decades have witnessed fundamental changes in food retailing. There has been a sharp decrease in store numbers, partly because food chains instituted a program of replacing small grocery stores with fewer but larger stores. Additional display space has been required to accommodate new and growing product lines. As recently as 10 years ago, supermarkets averaged less than 10,000 square feet and stocked fewer than 4,000 items. Today, however, the typical supermarket stocks over 6,000 items and has nearly 20,000 square feet of space. This 30-year period also witnessed the near elimination of clerk service by the introduction and adoption of self service. As self service became dominant, the sale of a product in a retail food store became increasingly dependent upon its location relative to the flow of customer traffic and its ability to attract the customer's attention. The basic requirement for a sale is that the shopper and the product offered for sale must meet. This is commonly referred to as customer-product exposure.

Problems of store layout and customer-product exposure have intensified as size of store and number of products handled have increased. To display the multitude of products more effectively and to attract and hold customers, many new ideas in store layout are being tried. Some of these ideas in store layouts exercise a degree of control over the flow of customer traffic; other layouts emphasize ease of customer shopping or freedom of movement within the store. Research indicates a significant relationship between dollar value of purchases and distance traveled by customers through a store's selling area. Consequently, questions have been raised concerning various types of store layouts and their effects on customers' shopping behavior.

One new layout calls for departments selling perishable products to be located in the approximate center of the store's selling area and dry groceries on the perimeter. Variations of this concept range from the ultramodified to the semi-modified, depending upon its departure from conventional store layouts. Modified layouts are characterized also by relatively short, low gondolas or cases, especially in the center of the store, which permit the customer to see a large proportion of the store's selling area; many cross-aisles; and greater departmentalization. Traditional or conventional layouts have dry groceries in the middle of the store's selling area, with produce, meat, and dairy departments at the sides. The conventional layout is often referred to as a "gridiron" layout because of the similarity in appearance between it and the yard markings of a football field.

Researchers of the Economic Research Service first studied the modified store layout in Ohio. The study was repeated later in New York and Nebraska, using a modified and a conventional store layout in each area. Each pair of stores was an outlet of the same chain and was selected by officials of the chain to be as nearly alike as possible with respect to factors other than layout which might affect shopping behavior--for example, size and location of store and socio-economic characteristics of customers. Stores more alike in size of selling area could have been selected by using outlets of different companies; but size appeared less important than other variables, such as differences in prices, brands, advertising, promotional and merchandising policies, and relative competition of stores from other chains.

For each observed customer, an enumerator noted the path taken, purchases

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1/ By Michael G. Van Dress, agricultural economist, Marketing Economics Division, Economic Research Service, USDA.

made, and other miscellaneous data. When the customer left the store, another shopper was observed in the same manner. This process was repeated until a representative number of records had been completed. In total, the shopping behavior of 1,292 customers with shopping carts was recorded on scaled diagrams of the 3 modified and 3 conventional layouts studied.

A shopper was credited with one purchase regardless of the number of units selected when they were of the same size, brand, and variety.

#### Customer Characteristics

Differences in customer characteristics were minor between the modified and conventional stores and do not appear to be associated with differences in shopping behavior. Over half of the customers

were between 30 and 50 years of age (table 8).

Although customers shopped only slightly longer in the conventional stores than in the modified ones, they made more purchases and spent more money per customer.

Over 30 percent of all customers consulted shopping lists. Customers in both types of layout who used lists averaged 4 more purchases and spent \$2.59 more than customers who did not have shopping lists. Shopping-list users visited more of the stores' selling areas than non-users. In doing so, users of shopping lists were exposed to more items and made more impulse purchases than other customers.

There was only a slight difference by layout in proportion of customers that

Table 8.--Shopping characteristics of customers in 6 food stores, by type of store layout, 1960-62

Characteristic	Modified	Conventional
	layout	layout
	Dollars	Dollars
Average expenditure per customer.....	8.56	11.40
Average value of each purchase.....	.61	.63
	Number	Number
Average number of purchases.....	14	18
Average number of minutes shopping time.....	22	23
Average number of minutes at checkout.....	5.4	5.5
	Percent	Percent
Age:		
18 to 30.....	29	26
30 to 50.....	53	55
Over 50.....	18	19
Shopping unit:		
Male or male and children.....	18	15
Female or female and children.....	53	59
Couples or couples and children.....	22	21
Other combinations.....	7	5

used a shopping list--32 percent in the modified and 35 percent in the conventional store layout. While customers without shopping lists spent significantly less than customers using them, irrespective of type of store layout, the differential was much greater in the modified stores. Customers patronizing modified stores and having shopping lists averaged spending \$2.91 more than customers not using lists. In the conventional layout, customers with shopping lists spent \$2.04 more. These findings indicate that the modified layout is particularly susceptible to incomplete store coverage and low rates of purchases by customers who have not planned most of their purchases in advance. The low rate of purchases by customers not using shopping lists was a factor contributing to the disparity in number of purchases and dollar value of purchases between all customers of modified and conventional layout stores.

#### Proportion of Selling Area Covered

The actual path taken by each customer observed was measured and relationships were established between actual distances traveled by customers and total distances that customers could have traveled through

selling areas of departments in both store layouts.

Coverage of the conventional stores was greater in each case. Conventional-store customers shopped each department more thoroughly than modified-store customers. Customers of conventional stores covered 52 percent of the distance through the total selling area; in modified-layout stores, shoppers covered only 32 percent. The smallest difference, 3 percentage points, existed between dairy departments of the two layouts. The largest difference in food departments, 15 percentage points, existed between frozen foods departments (table 9).

#### Purchases by Departments

The percentage of total purchases in each food department was about the same in each type of store layout. Groceries were about 53 percent of the total number of food purchases and frozen foods about 6 percent. The remaining food departments each accounted for between 9 and 15 percent of the product mix (table 10).

About the same proportion of shoppers entered the grocery, meat, produce, and

Table 9 ---Proportion of selling area covered by customers in 6 food stores, by type of store layout, 1960-62

Department	Modified layout	Conventional layout
	<u>Percent</u>	<u>Percent</u>
Grocery.....	48	56
Meat.....	62	69
Produce.....	46	52
Dairy.....	70	73
Frozen foods.....	47	62
All food departments.....	48	58
Nonfoods.....	12	1/ 30
Total store.....	32	52

1/ One conventional-layout store did not have a separate nonfoods department.

Table 10.--Customer purchases in specified departments as percentages of total purchases in 6 food stores, by type of store layout, 1960-62

Department	Modified	Conventional
	layout	layout
	Percent	Percent
Grocery.....	53	52
Meat.....	12	12
Produce.....	15	14
Dairy.....	9	10
Frozen foods.....	6	6
Nonfoods.....	6	8

dairy departments in the conventional and modified stores. But the percentage of customers purchasing was greater in the conventional stores than in the modified stores in each department except produce. Purchases of produce were 2 percentage points greater in modified-layout stores (table 11).

For frozen foods, a greater proportion of the customers entered this department in modified stores than in conventional ones. Yet, the percentage of customers purchasing frozen foods in modified stores was well below that in the conventional layout. Two factors appeared to be responsible for the disproportionate number of customers entering and purchasing frozen foods in the two types of stores. The frozen food cases in modified-layout

stores were of the short variety, which are not conducive to impulse purchasing because they can be shopped easily from the aisles. In addition, customers entering these aisles were counted as entering the frozen food department, whereas some of them may have entered merely because the aisles were a convenient path to something else.

#### Purchases by Commodity Group

Of the 32 products and groups of products for which data were tabulated, only three commodities--onions, frozen prepared dinners, and citrus fruits--were purchased by a greater proportion of customers of modified-layout stores than of conventional-layout stores (table 12).

Table 11.--Percentage of customers entering and making purchases in specified departments in 6 food stores, by type of store layout, 1960-62

Department	Modified layout		Conventional layout	
	Entering	Purchasing	Entering	Purchasing
	Percent	Percent	Percent	Percent
Grocery.....	98	92	99	95
Meat.....	92	66	91	70
Produce.....	85	78	88	76
Dairy.....	83	63	85	73
Frozen foods.....	87	37	76	52
Nonfoods.....	79	30	95	41

Table 12.--Percentage of customers purchasing specified products in 6 food stores, by type of store layout, 1960-62

Commodity group	Modified	Conventional
	layout	layout
	<u>Percent</u>	<u>Percent</u>
Bread, rolls, and pastry.....	60	73
Milk.....	34	40
Cookies and crackers.....	31	41
Canned vegetables.....	30	35
Coffee, tea, and cocoa.....	22	32
Cereal.....	26	30
Eggs.....	27	28
Beer and soda.....	21	26
Chips and pretzels.....	15	26
Canned fruit.....	19	25
Dressings and spreads.....	17	25
Flour and flour mixes.....	19	24
Spaghetti, rice, dried beans and peas.....	21	24
Ice cream.....	17	21
Soup.....	17	21
Sugar.....	15	21
Frozen juices.....	13	21
Bananas.....	15	19
Frozen vegetables.....	15	19
Potatoes.....	18	19
Canned juice.....	16	17
Preserves and peanut butter.....	14	15
Canned tomatoes and sauce.....	10	13
Citrus fruits.....	16	13
Pet foods.....	11	13
Gelatins and puddings.....	8	12
Baby food.....	8	9
Frozen fish.....	6	9
Frozen prepared dinners.....	9	8
Processed milk.....	6	8
Shortening.....	8	8
Onions.....	8	6
:	:	:

#### Product Location

Product exposure is a critical factor in the modern food supermarket. A well-designed store layout encourages more complete shopping of the store selling area and provides opportunity for a greater number of purchasing decisions. In addition, more uniform and complete shopping of a store can be encouraged further by strategically locating items that are frequently and consistently purchased by a sizable proportion of shoppers. Judicious product location complements good store

layout, or, to a degree, compensates for inefficient layouts.

Product arrangement involves locating frequently purchased items so that customers must travel through as much of the store selling area as possible to purchase them. Thus, increased customer exposure is gained for new items, items in temporary oversupply, seasonal products, and impulse items located throughout the store. Also, selective location of individual items may improve store efficiency by distributing customer traffic

flow in such a way as to prevent congestion in some areas and low traffic in others.

In this study, variation in proportion of customers purchasing products was accentuated somewhat by the smaller number of purchases in modified layout stores. Yet, purchasing practices were found in the present study to be generally similar to those of previous findings. For example, in all of the stores studied, canned fruits were purchased by an average of 22 percent of all customers (table 13). Among individual stores, the proportion buying canned fruits would be expected to fall within a relatively narrow range of 17 to 27 percent, in about 2 out of 3 instances. On the other hand, eggs were purchased by 27 percent of customers; among individual stores, the proportion buying would be expected to range from 12 to 42 percent.

The suitability of a product or item for use as a traffic builder is solely dependent on its ability to attract purchasers. Due to many factors, a product that has pulling power in one store may have little or no power in others. Where substantial variation exists among stores in proportion of customers buying, the ability of the product to attract purchasers must be evaluated separately for each store. Canned tomatoes and sauce, for example, were purchased by an average of only 12 percent of customers patronizing the stores studied. But the upper limit of the confidence interval indicates that in a given store the proportion of customers buying might have been as high as 27 percent. An operator of such a store might effectively use this commodity group to increase customer traffic in a particular area, to encourage a more thorough traversing of the store's selling area, or, possibly, to reduce customer congestion by moving the product to another place.

#### Precepts Developed from Research Findings

New ideas in store layout will continue to be advanced to cope with the increasing

problems of expanding product lines and associated problems of customer-product exposure, competition between stores for customers, and customer loyalty. As food retailing changes, so must many guidelines now used in the design of good store layout. However, there are some precepts of store layout that are persistent and stand out in study after study.

Long, unbroken gondolas lend themselves to controlling customer traffic flow. Although a cross-aisle is necessary with extremely long gondolas, cross-aisles distract customers and should be used with discretion. Results of an earlier study strongly indicated that split gondolas reduce the flow of customer traffic and the proportion of the aisle shopped.<sup>2/</sup> In addition, it showed that customers shop short gondolas visually from the gondola end instead of walking through the aisle.

The strategic location of frequently purchased items complements good store layout and compensates for inefficient layouts, to a degree, by encouraging more uniform and complete shopping of a store. Customer traffic in gondola aisles can be increased further by locating price-featured items near the center of the gondola.

Reasonable control of customer movement in the store not only aids store management, but also makes shopping easier for the customer.

While retailers and others directly involved in food distribution are most immediately concerned and stand to benefit most from improved selling efficiency, more efficient retailing has implications for producers of agricultural commodities. Today, growers are almost entirely dependent on others for the sale of their products. How well the distribution function is performed may materially affect the well-being of producers of farm products. As an example, it was found that the proportion of customers buying 29 of 32 product groups was 1 to 13

<sup>2/</sup> Havas, Nick, and Smith, H. M., *Customers' Shopping Patterns in Retail Food Stores*, U.S. Dept. Agr., ERS-99, Dec. 1962.

Table 13.--Proportion of customers making purchases of selected commodity groups in 6 food stores, and coefficients of variation, 1960-62

Commodity group	Proportion of customers purchasing 1/		
	Mean	Coefficient of variation:	Confidence limit
	Percent	Percent	Percent
<u>Small variation among stores</u>			
Bread, rolls, and pastry.....	66	14	54-78
Milk.....	37	22	26-48
Cookies and crackers.....	36	19	26-46
Canned vegetables.....	32	22	22-42
Cereal.....	28	18	21-35
Beer and soda.....	23	12	19-27
Canned fruit.....	22	17	17-27
Dressings and spreads.....	21	29	13-28
Flour and flour mixes.....	21	18	16-26
Ice cream.....	19	21	14-24
Soup.....	19	21	14-24
Sugar.....	18	21	13-23
Frozen juices.....	17	29	10-24
Preserves and peanut butter.....	15	13	12-18
Baby food.....	9	22	6-12
Onions.....	7	29	4-10
Processed milk.....	7	29	4-10
.....	.....	.....	.....
<u>Medium variation among stores</u>			
Coffee, tea, and cocoa.....	26	37	12-40
Potatoes.....	18	39	8-28
Canned juice.....	17	35	9-25
Pet foods.....	12	33	7-17
Gelatins and puddings.....	10	30	6-14
Shortening.....	8	38	4-12
Frozen prepared dinners.....	8	33	4-12
.....	.....	.....	.....
<u>Large variation among stores</u>			
Eggs.....	27	41	12-42
Spaghetti, rice, dried beans and peas.....	22	41	10-34
Chips and pretzels.....	21	52	6-36
Bananas.....	17	41	7-27
Frozen vegetables.....	17	41	7-27
Citrus fruits.....	15	67	1-29
Canned tomatoes and sauce.....	12	92	0-27
Frozen fish.....	8	57	1-15
.....	.....	.....	.....

1/ The coefficient of variation shows the relative consistency from store to store with which customers would be expected to purchase the products indicated. The confidence limits indicate the interval between which the mean proportion of customers purchasing would be expected to occur in two-thirds of the cases.

percentage points higher in stores with conventional layouts than in stores with modified layouts. In stores with conventional layouts, 40 percent of customers bought milk compared with 34 percent in modified layouts. Bread, rolls, and pastry, as a group, was purchased by 73 percent of customers in conventional-layout stores compared with 60 percent in the modified.

Customer behavior studies also provide growers with information on which action can be taken to influence the retail merchandising of their product. Many groups, representing producers of various agricultural commodities, are currently engaged in self-help programs to improve the demand for their products. These promotional activities include programs directed toward the wholesale and retail trade. Through direct contacts of merchandising representatives and the distribution of point-of-purchase promotional

material, producer groups seek to help retailers develop and use merchandising practices that are most efficient in creating demand. Knowledge about the effectiveness of merchandising techniques helps producer groups develop programs that retailers will use.

Because many purchases in retail food stores are made on impulse, it is equally advantageous to producers as well as retailers for every customer to be exposed to as many different items as possible. Maximum consumer-product exposure at retail not only encourages increased purchases but also provides a more sensitive measure of consumer preferences. Without a full understanding or appreciation of consumer preference, neither the retailer, distributor, nor producer can be properly responsive or carry out his function most efficiently.

THE TRAFFIC PATTERN OF RAW COTTON SHIPPED FROM  
WAREHOUSES IN THE UNITED STATES, 1961-62 1/

The Cotton Belt spans the entire southern half of the United States and includes the major producing States of Arizona, California, and New Mexico in the West; Oklahoma and Texas in the Southwest; Arkansas, Louisiana, Mississippi, Missouri, and Tennessee in the South Central region; and Alabama, Georgia, South Carolina, and North Carolina in the Southeast. Domestic mill consumption of cotton is concentrated in the Southeast, with only minor volumes consumed in other areas of the country. Exports are mainly from ports in California, Texas, and Louisiana, and across the U.S.-Canadian border.

The destinations to which cotton is shipped from the widely dispersed Cotton Belt are determined by a number of factors. Among these are the proximity of the producing region to the consuming center or port, the qualities of the cotton produced in the particular region, and the quality requirements of the destinations. Little information has been available as to the major destinations to which specific producing regions ship cotton. Similarly, only fragmentary information has been available on the relative importance of railroads and motortrucks in the movement of cotton in these regions.

The intent of this article is to show the major destinations to which cotton was shipped from the producing regions in 1961-62 and to indicate the relative importance of rail and truck shipments. Data on shipments during the 1961-62 season were secured from Government-approved warehouses in the producing regions. 2/

Destinations as used in this article are "first destinations" and not necessarily "final destinations." Consequently, total shipments included a substantial volume of reshipments. Information is not available for determining the extent to which reshipments contributed to the total shipments.

Shipments Originated in the Western Region

Destinations.--Shipments of about 2.8 million bales of cotton were reported by warehouses located in Arizona, California and New Mexico. 3/ Of this total movement of western cotton, 45 percent was shipped to the Southeastern States and 42 percent to California and Texas ports (fig. 3). Minor shipments included 7 percent to interior concentration points, 1 percent to the Northeastern States, and 3 percent to Canada.

Shipments to the Southeast accounted for about 56 percent of the total shipments in California compared with 27 percent in Arizona and New Mexico. Conversely, 61 percent and 52 percent, respectively, of the total shipments in Arizona and New Mexico went to ports compared with 31 percent in California. Movement of cotton to California ports was almost exclusively from Arizona and California; movement to Texas ports was mainly from New Mexico.

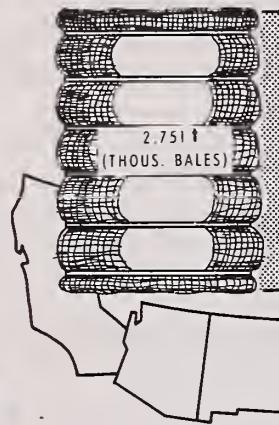
The interior concentration of western cotton was from Arizona to California, from California to Texas and the South

1/ Prepared by Joseph R. Potter, Jr., agricultural marketing specialist and Dewey L. Pritchard, agricultural economist, Marketing Economics Division, Economic Research Service, USDA.

2/ These warehouses were surveyed by the Commodity Credit Corporation office in New Orleans in 1963. All shipments are not included; a small number of approved warehouses did not report and some warehouses that ship cotton are not Government approved and, thus, were not surveyed. Moreover, a small proportion of cotton is known to have moved directly from the gin to domestic mills and to port warehouses for export.

3/ California shipments were partly estimated.

# COTTON SHIPMENTS, WESTERN REGION\*



ALABAMA, GEORGIA	
5% Rail 98 Truck 2	
S. CAROLINA, N. CAROLINA, VIRGINIA	
40% Rail 99 Truck 1	
INTERIOR CONCENTRATION POINTS △	
7% Rail 89 Truck 11	
NORTH EASTERN STATES	
1% Rail 100 Truck 0	
CALIFORNIA PORTS	
36% Rail 52 Truck 48	
TEXAS PORTS	
6% Rail 81 Truck 19	
CANADA	
3% Rail 100 Truck 0	
OTHER ♦	
2% Rail 92 Truck 8	

\*AS REPORTED BY GOVERNMENT APPROVED WAREHOUSES IN ARIZONA, CALIFORNIA, AND NEW MEXICO. 1961-62 SEASON.

♦LESS THAN .5%.

†SHIPMENTS IN CALIFORNIA PARTLY ESTIMATED.

△INCLUDES SHIPMENTS TO INTERIOR POINTS IN CALIFORNIA, TEXAS, AND SOUTH CENTRAL REGION.

♦INCLUDES DESTINATIONS DESIGNATED AS 'OTHER' BY SHIPPING WAREHOUSES AND MINOR DESTINATIONS.

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Figure 3

Central region, and from New Mexico to Texas. 4/

Carriers.-- Railroads hauled nearly four-fifths of the cotton shipped in the Western region, being used almost exclusively for shipments to the Southeastern and Northeastern States and exclusively to Canada. Trucks were employed extensively for shipments to the ports, hauling nearly one-half of the cotton shipped to California ports and one-fifth of the cotton shipped to the Texas ports (fig. 3). Truck shipments to ports from this region represented 13 percent of the total truck shipments of cotton in the United States.

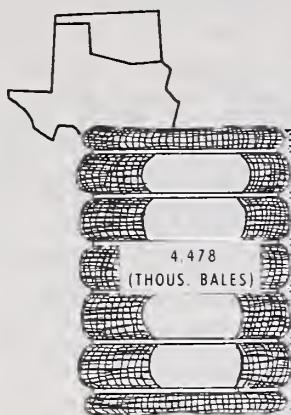
## Shipments Originated in the Southwestern Region

Destinations.-- Shipments totaling approximately 4.5 million bales of cotton were reported by warehouses located in Oklahoma and Texas. Of this amount, 31 percent was shipped to the Southeastern States and 56 percent was shipped to Texas ports (fig. 4). Minor shipments included 8 percent to interior concentration points, 1 percent to the Northeastern States, and 2 percent to Canada.

Shipping patterns were similar for both Oklahoma and Texas; however, there was considerable variation in shipping patterns

4/ Interior concentration as used in this article consists of shipments to non-consuming points within the Cotton Belt. This cotton is eventually reshipped to final destinations.

## COTTON SHIPMENTS, SOUTHWESTERN REGION\*



ALABAMA, GEORGIA	
19%	Rail 97 Truck 3
S. CAROLINA, N. CAROLINA, VIRGINIA	
INTERIOR CONCENTRATION POINTS <sup>△</sup>	
12%	Rail 98 Truck 2
8%	Rail 62 Truck 38
NORTH EASTERN STATES	
1%	Rail 67 Truck 33
TEXAS PORTS	
56%	Rail 69 Truck 31
CANADA	
2%	Rail 100 Truck <sup>○</sup>
OTHER <sup>†</sup>	
2%	Rail 65 Truck 35

\* AS REPORTED BY GOVERNMENT APPROVED WAREHOUSES IN OKLAHOMA AND TEXAS, 1961-62 SEASON.

△ INCLUDES SHIPMENTS TO INTERIOR POINTS IN CALIFORNIA, TEXAS, AND SOUTH CENTRAL REGION.

† INCLUDES DESTINATIONS DESIGNATED AS 'OTHER' BY SHIPPING WAREHOUSES AND MINOR DESTINATIONS.

○ LESS THAN .5%.

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Figure 4

for specialized producing areas within the region. For example, port shipments represented a much higher proportion in the Plains of Texas than for the entire region; but shipments to the Southeast represented a considerably smaller proportion for this area than for the total region. Some of the variation in flow patterns within the region is explained by the fact that not all port shipments in the Southwestern region were for export, but for concentration and reshipment to domestic consuming centers. Warehouses at Texas ports reported shipments of over one-half million bales to domestic consuming centers in 1961-62.

Cotton shipped to interior concentration points was mainly from Oklahoma to Texas and shipments within Texas. Only a minor volume was shipped to points in California and the South Central region.

Carriers.--Railroads hauled about 78 percent of the cotton shipped in the South-

western region, with almost complete domination of the longer hauls to the Southeast and to Canada. Railroads also hauled more than two-thirds of the volume shipped to ports (fig. 4). Undoubtedly, some of this traffic was to the ports for concentration and reshipment to domestic consuming centers under the "intransit" privileges granted by the railroads.

Of the 22 percent that moved by truck, virtually the entire movement (20 percent) constituted short and long haul intrastate movements to other Texas warehouses and ports. There was a particularly heavy interarea highway movement between the ports of Brownsville, Corpus Christi, Houston, and Galveston. Apparently, the requirement for a hurried exchange of cotton between coastal ports to "make up" ship loadings was met by the use of rapid truck movement, rather than the slower rail shipments.

This heavy intrastate movement by

trucks constituted approximately 24 percent of the entire truck movement in the Cotton Belt.

The concentration of cotton was within the region, with a substantial proportion going to Tennessee for concentration in Memphis.

#### Shipments Originated in the South Central Region

Destinations.--Warehouses in the South Central region reported shipments of about 4.7 million bales of cotton in 1961-62, of which 70 percent was to the Southeastern States, 10 percent to interior concentration points, 3 percent to the Northeastern States, 9 percent to the port of New Orleans, and 6 percent to Canada (fig. 5).

Shipments to the Southeast ranged from about 64 percent of the total shipment in Louisiana to 76 percent of the total shipment in Arkansas. Shipments to the port of New Orleans ranged from only 2 percent of the total shipments in Missouri to 20 percent in Louisiana. A higher proportion of the total shipments from Tennessee and Missouri than from other South Central States went to the Northeastern States and Canada.

Carriers.--The railroads hauled about 79 percent of the cotton shipped in the South Central region compared with 21 percent by truck. Truck movements as a proportion of total shipments ranged from about 12 percent in Tennessee to 32 percent in Mississippi, with trucks hauling a much higher proportion of total shipments in Arkansas, Mississippi, and Missouri than in Tennessee and Louisiana.

In this region, trucks were not only an important carrier of cotton to the ports--as in the West and Southwest--but were also a definite competitor of the railroads for traffic to the Southeast. Trucks hauled 37 percent of the total cotton shipped to nearby Alabama and Georgia compared with 31 percent to the port of New Orleans (fig. 5).

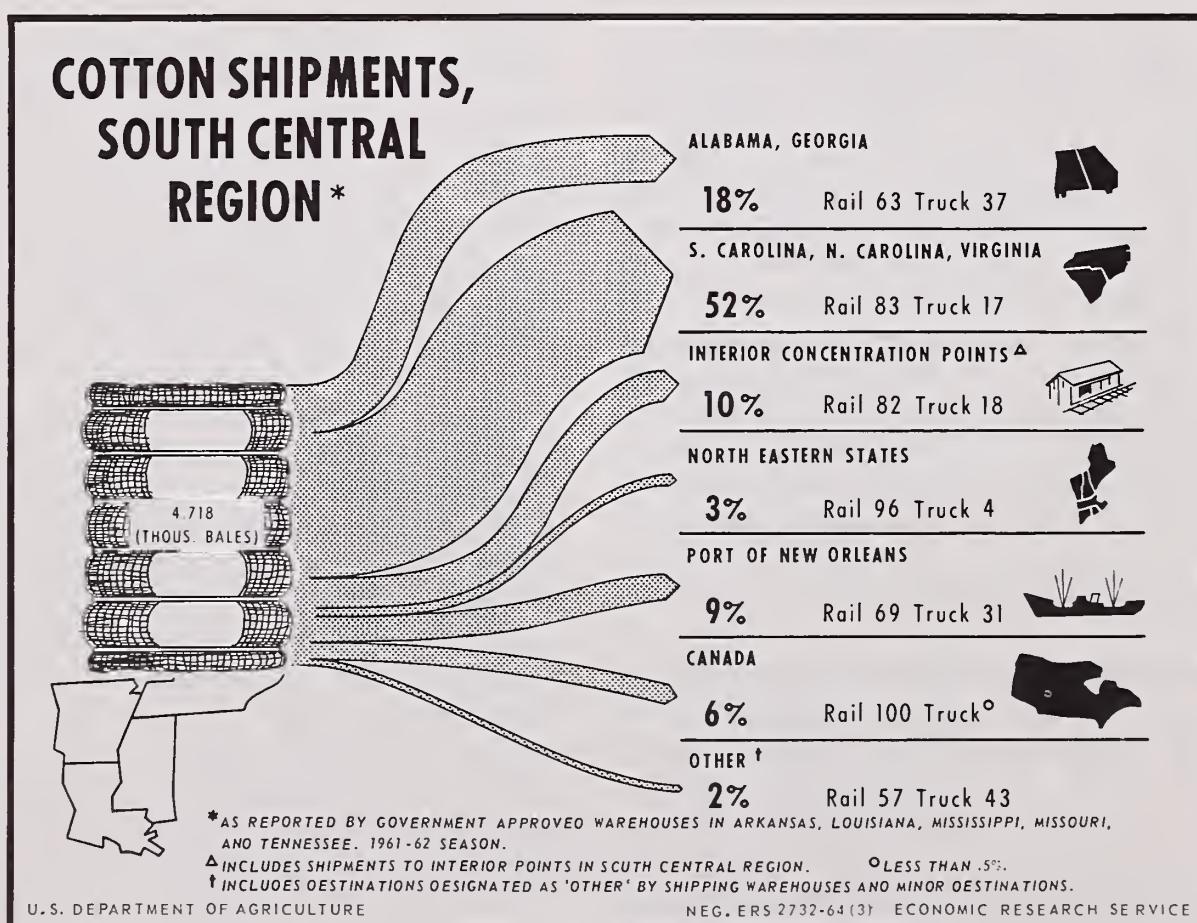


Figure 5

Even though trucks hauled only 17 percent of the cotton shipped to the Carolinas and Virginia, this represented a volume of cotton almost equal to the combined volume shipped by truck to Alabama and Georgia and to the port of New Orleans.

Truck movements to the Southeast and the port of New Orleans from the South Central region accounted for 23 percent of total truck shipments of cotton in the United States.

Shipments Originated in the Southeastern Region

Destinations.--The Southeastern States of Alabama, Georgia, South Carolina, and North Carolina are the major cotton consuming States in the United States, accounting for about 90 percent of the domestic consumption in 1961-62. Therefore, it would be expected that shipments of cotton in this region would be limited

mainly to movement within the region. Furthermore, shipments in the Southeastern region not only include cotton produced in the region but also a substantial volume that was shipped from other regions for concentration before being disseminated to specific consuming establishments.

Total shipments in this region amounted to 2-1/4 million bales in 1961-62 (fig. 6). Intrastate shipments were extremely heavy in each of the States, ranging from 40 percent of total shipments in Alabama to 83 percent in North Carolina. Interstate shipments in the Southeast were mainly from Alabama to Georgia and the Carolinas, from Georgia to Alabama and the Carolinas, from South Carolina to North Carolina and Georgia, and from North Carolina to South Carolina. Only a minor volume of cotton was shipped to Virginia and to the ports in this area.

Carriers.--Since shipments in the Southeast were mostly within the region, trucks were the major carriers, averaging about

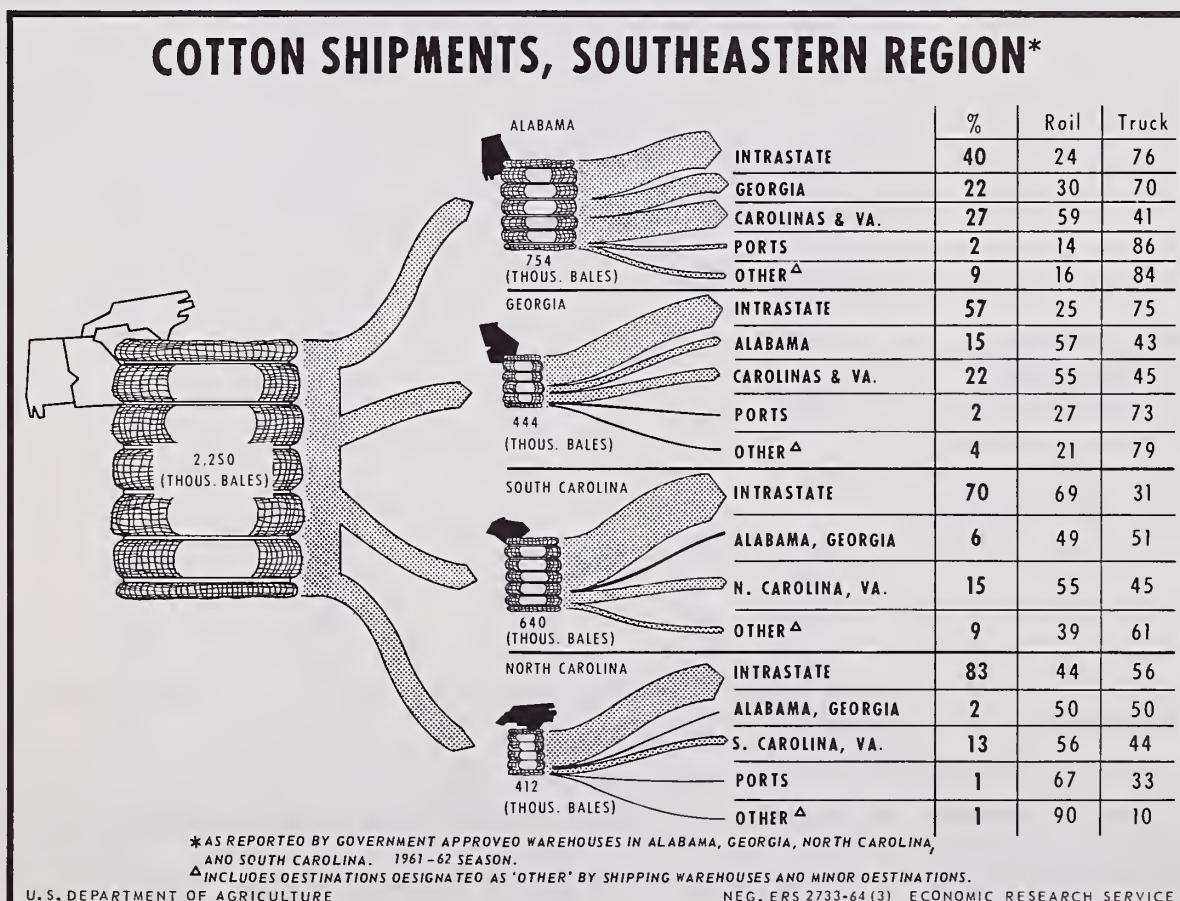


Figure 6

56 percent of the total shipments in the region and ranging from 37 percent in South Carolina to 66 percent in Alabama. Trucks hauled practically all of the cotton produced in the Southeast that was shipped to consuming establishments. Rail movements in this area were mostly "in transit" cotton from other producing regions. Rail shipments were much greater in the Carolinas than in Alabama and Georgia because of the smaller production in those States and the more voluminous rail shipments into those States from other regions. (fig. 6). Of the extremely heavy rail shipments in South Carolina, nearly 95 percent were shipped from the warehouses in Anderson, Greenville, Greenwood, Columbia, and Spartanburg--all major consuming centers for raw cotton.

Thirty-three percent of the total U.S. truck shipments of cotton were accounted for by the States within the Southeastern region.

#### Shipments Originated in All Producing Regions

In total, more than 14 million bales of cotton were reported shipped in 1961-62; with 19 percent originating in the West, 32 percent in the Southwest, 33 percent in the South Central region, and 16 percent in the Southeast (table 14). About 8 million bales were shipped to the Southeastern consuming States; distributed 33 percent to Alabama and Georgia and 67 percent to the Carolinas and Virginia. Shipments to the Southeast were only slightly less than consumption by these states in 1961-62.

Shipments to Alabama and Georgia represented about equal proportions from the Southwest, South Central, and Southeast, but only 5 percent from the West. The South Central region was a much heavier shipper to the Carolinas and

Table 14.--Total cotton shipped to specified destinations and proportion originated in specified regions, 1961-62 season

Destination	Quantity:	Proportion of shipments originated in					
		shipped:		West	Southwest	South Central	Southeast
		1,000	bales	Pct.	Pct.	Pct.	Pct.
Alabama and Georgia ....	2,686		5	32	32	31	100
South Carolina, North							
Carolina and Virginia..	5,359		20	10	46	24	100
Interior concentration							
points 1/ .....	1,058		18	33	49	---	100
New England and Eastern							
States .....	211		14	25	61	3/	100
Ports .....	4,101		28	61	10	1	100
Canada .....	404		18	18	64	3/	100
Other 2/ .....	377		15	19	26	40	100
All destinations .....	14,196		19	32	33	16	100

1/ Includes intrastate shipments in non-consuming States and interstate shipments to non-consuming States.

2/ Includes destinations designated by shipping warehouses as "other" and minor destinations.

3/ Less than 0.5 percent.

Virginia and also to the Northeast and Canada than other regions. The Southwestern region was the lightest shipping region to the Carolinas and Virginia.

Port shipments represented the second largest volume amounting to 4.1 million bales, with nearly 90 percent of these shipments originating in the Southwest

and West. Over 1 million bales were shipped to interior concentration points within the nonconsuming regions. Almost one-half of these shipments were in the South Central region, with a major proportion most likely going to Memphis for concentration and reshipment to consuming establishments.

SELECTED NEW PUBLICATIONS

1. "Changes in Quality and Value of Cotton Bales and Samples During Storage," by C. Curtis Cable, Jr., Harvin R. Smith, and Zolon M. Looney, U.S. Dept. Agr., Econ. Res. Ser., MRR-645, Feb. 1964.
2. "Contract Production of Truck Crops -- 12 Selected Areas, United States," by Ronald L. Mighell, Lawrence A. Jones, and Earle E. Gavett, U.S. Dept. Agr., Econ. Res. Ser., ERS-152, Mar. 1964.
3. "Drive-in Dairies in Central California -- Development, Organization, and Operation," by Jack E. Klein and Leo R. Gray, U.S. Dept. Agr., Econ. Res. Ser., MRR-636, Dec. 1963.
4. "Economic Aspects of Pecan Production and Marketing: Arkansas, Florida, Georgia, Mississippi, New Mexico, and South Carolina," by Robert C. McElroy and Jules V. Powell, U.S. Dept. Agr., Econ. Res. Ser., AER-41, Sept. 1963.
5. "For-Hire Trucking of Exempt Farm Products -- Operating Practices and Nature of Competition," by Bruce H. Wright, U.S. Dept. Agr., Econ. Res. Ser., MRR-649, Mar. 1964.
6. "Freeze-Drying of Foods: Cost Projections," by Kermit Bird, U.S. Dept. Agr., Econ. Res. Ser., MRR-639, Jan. 1964.
7. "How Color of Red Delicious Apples Affects Their Sales," by Hugh M. Smith and Robert E. Frye, U.S. Dept. Agr., Econ. Res. Ser., MRR-618, Feb. 1964.
8. "Inventory of Food Products and Beverages in Warehouses at Wholesale, 1962," by Michael G. Van Dress, U.S. Dept. Agr., Econ. Res. Ser., Supplement to MRR-632, Feb. 1964.
9. "Long-Distance Shipment of Market Milk," by William T. Butz, U.S. Dept. Agr., Econ. Res. Ser., MRR-648, Mar. 1964.
10. "Prices and Spreads for Fresh Fruits and Vegetables Sold in Selected Markets, 1956-62," by Victor G. Edman, U.S. Dept. Agr., Econ. Res. Ser., Stat. Bull.-340, Feb. 1964.
11. "Prices, Marketing Margins, and Uses of Peanuts in Peanut Butter," by Virginia M. Farnsworth, U.S. Dept. Agr., Econ. Res. Ser., MRR-624, Dec. 1963.
12. "Selected Writings on Freeze-Drying of Foods," by Kermit Bird, U.S. Dept. Agr., Econ. Res. Ser., ERS-147, Jan. 1964.
13. "Sweeteners Used by Food Processing Industries -- Their Competitive Position in the United States," by Roy A. Ballinger and L. C. Larkin, U.S. Dept. Agr., Econ. Res. Ser., AER-48, Jan. 1964.
14. "Taxes Paid by Firms Marketing Farm Food Products," by William T. Wesson, U.S. Dept. Agr., Econ. Res. Ser., AER-50, Feb. 1964.
15. "The Organization of Wholesale Fruit and Vegetable Markets in Minneapolis-St. Paul and Duluth-Superior," by John K. Hanes, U.S. Dept. Agr., Econ. Res. Ser., MRR-647, Mar. 1964.
16. "Using Panel Data in Analyzing Consumer Demand for Meat," by Ayers Brinser, Harry Allison, and Charles Zwick, U.S. Dept. Agr., Econ. Res. Ser., Dec. 1963.

Table 15.--Farm food products: Retail cost, farm value of equivalent quantities sold by producers, byproduct allowance, farm-retail spread, and farmer's share of retail cost, January-March 1964 1/

Product 2/	Farm equivalent	Retail unit	Retail	Gross	Byproduct	Net	Farm-	Farm-	Farmer's
			cost	farm	allowance	farm	retail	spread	share
			Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Percent
Market basket .....			1078.03	---	---	395.46	682.57	37	
Meat products .....			271.10	---	---	123.63	147.47	46	
Dairy products .....			201.69	---	---	89.12	112.57	44	
Poultry and eggs .....	Average quantities		87.99	---	---	52.53	35.46	60	
Bakery and cereal products	Farm produce equivalent to products bought by urban families	purchased per urban wage-earner and	172.54	---	---	30.85	141.69	18	
All ingredients .....		clerical-worker family in 1952	254.38	---	---	80.32	174.06	32	
Grain .....			149.25	---	---	54.44	94.81	36	
All fruits and vegetables .....			77.33	---	---	25.35	51.98	33	
Fresh fruits and vegetables .....			105.13	---	---	25.88	79.25	25	
Fresh vegetables .....			42.11	---	---	10.98	31.13	26	
Processed fruits and vegetables .....			48.22	---	---	8.03	40.19	17	
Fats and oils .....				Cents	Cents	Cents	Cents	Cents	Percent
Miscellaneous products .....									
Beef (Choice grade) .....	2.25 lb. Choice grade cattle	Pound	78.0	44.9	3.6	41.3	36.7	53	
Lamb (Choice grade) .....	2.41 lb. lamb	Pound	73.9	45.2	7.4	37.8	36.1	51	
Pork (retail cuts) .....	2.13 lb. hogs	Pound	56.1	31.1	4.0	27.1	29.0	48	
Butter .....	Cream and whole milk	Pound	75.3	---	---	54.8	20.5	73	
Cheese, American process .....	Milk for American cheese	1/2 pound	37.2	---	---	15.2	22.0	41	
Ice cream .....	Cream and milk	1/4 gallon	84.7	---	---	4/22.8	61.9	27	
Milk, evaporated .....	Milk for evaporating	14-1/2 ounce can	15.4	---	---	6.5	8.9	42	
Milk, fluid .....	Wholesale fluid milk	Quart	25.5	---	---	10.8	14.7	42	
Chickens, frying, ready-to-cook .....	1.37 lb. broilers	Pound	38.6	---	---	19.6	19.0	51	
Eggs .....	1.03 doz.	Dozen	56.1	---	---	36.6	19.5	65	
Bread, white .....									
All ingredients .....	Wheat and other ingredients	Pound	21.5	---	---	3.1	18.4	14	
Wheat .....	.882 lb. wheat	Pound	---	.3	.25	---	12		
Crackers, soda .....	1.38 lb. wheat	Pound	31.0	.45	.5	4.0	27.0	13	
Corn flakes .....	1.57 lb. white corn	12 ounces	28.5	3.2	.8	2.4	26.1	8	
Corn meal .....	1.34 lb. white corn	Pound	14.5	2.7	.2	2.5	12.0	17	
Flour, white .....	6.9 lb. wheat	5 pounds	57.3	22.4	2.6	19.8	37.5	35	
Rolled oats .....	2.31 lb. oats	18 ounces	24.3	4.6	.6	4.0	20.3	16	
Apples .....	1.08 lb. apples	Pound	15.5	---	---	5.1	10.4	33	
Grapefruit .....	1.04 grapefruit	Each	15.4	---	---	4.2	11.2	27	
Lemons .....	1.04 lb. lemons	Pound	21.6	---	---	4.8	16.8	22	
Oranges .....	1.04 doz. oranges	Dozen	79.3	---	---	28.3	51.0	36	
Beans, green .....	1.09 lb. snap beans	Pound	31.5	---	---	15.0	16.5	48	
Cabbage .....	1.10 lb. cabbage	Pound	10.8	---	---	2.3	8.5	21	
Carrots .....	1.06 lb. carrots	Pound	14.9	---	---	2.3	12.6	15	
Celery .....	1.11 lb. celery	Pound	16.3	---	---	6.3	10.0	39	
Lettuce .....	1.41 lb. lettuce	Head	21.7	---	---	8.9	12.8	41	
Onions .....	1.06 lb. onions	Pound	11.6	---	---	3.5	8.1	30	
Potatoes .....	10.42 lb. potatoes	10 pounds	64.4	---	---	16.5	47.9	26	
Sweetpotatoes .....	1.12 lb. sweetpotatoes	Pound	15.6	---	---	5.7	9.9	37	
Tomatoes .....	1.18 lb. tomatoes	Pound	36.1	---	---	13.3	22.8	37	
Orange juice, canned .....	5.88 lb. Fla. oranges for canning	46 ounce can	63.4	---	---	29.4	34.0	46	
Peaches, canned .....	1.89 lb. Calif. cling	No. 2-1/2 can	33.8	---	---	5.4	28.4	16	
Beans with pork, canned .....	.35 lb. Mich. dry beans	16 ounce can	15.1	---	---	2.2	12.9	15	
Corn, canned .....	2.49 lb. sweet corn	No. 303 can	19.1	---	---	2.4	16.7	13	
Peas, canned .....	.69 lb. peas for canning	No. 303 can	22.7	---	---	2.9	19.8	13	
Tomatoes, canned .....	1.84 lb. tomatoes for processing	No. 303 can	16.1	---	---	2.5	13.6	16	
Orange juice concentrate, frozen .....	3.05 lb. Fla. oranges for frozen concentrated juice	6 ounce can	32.8	---	---	13.3	19.5	41	
Strawberries, frozen .....	.51 lb. strawberries for processing	10 ounces	27.7	---	---	6.1	21.6	22	
Beans, green, frozen .....	.71 lb. beans for processing	9 ounces	23.7	---	---	3.8	19.9	16	
Peas, frozen .....	.70 lb. peas for freezing	10 ounces	20.9	---	---	3.0	17.9	14	
Dried beans (navy) .....	1.00 lb. Mich. dry beans	Pound	17.6	---	---	6.4	11.2	36	
Dried prunes .....	.97 lb. dried prunes	Pound	40.2	---	---	14.0	26.2	35	
Margarine, colored .....	Soybeans, cottonseed and milk	Pound	27.6	---	---	6.7	20.9	24	
Peanut butter .....	1.77 lb. peanuts	Pound	57.8	---	---	20.2	37.6	35	
Salad dressing .....	Cottonseed, soybeans, sugar, and eggs	Pint	38.5	---	---	6.4	32.1	17	
Vegetable shortening .....	Soybeans and cottonseed	3 pounds	82.3	---	---	23.8	58.5	29	
Corn sirup .....	1.90 lb. corn	24 ounces	30.0	3.7	.7	3.0	27.0	10	
Sugar .....	40.04 lb. sugar beets	5 pounds	73.5	24.8	1.2	5/23.6	5/49.9	5/32	

1/ The methods of calculation and the sources of price data are given in Part II of "Farm-Retail Spreads for Food Products," U. S. Dept. Agr. Misc. Pub. 741, 1957.

2/ Product groups include more items than those listed in this table. For example, the meat products group includes veal and lower grades of beef in addition to carcass beef of Choice grade, lamb, and pork.

3/ This estimate of the farmer's share does not allow for Government payments to producers.

4/ Farm value of cream and milk only.

5/ Net farm value adjusted for Government payments to producers was 27.8 cents; farm-retail spread adjusted for Government processor tax was 47.2 cents, and farmer's share of retail cost based on adjusted farm value was 38 percent.

Table 16.-Farm food products: Retail cost and farm value, January-March 1964, October-December 1963,  
January-March 1963, and 1957-59 average 1/

Product 2/	Retail unit	Retail cost								Net farm value 3/								
		Jan.- Mar. 1964	Oct.- Dec. 1963	Jan.- Mar. 1963	1957-59 average	1963	Percent from 1963	Jan.- Mar. 1964	Oct.- Dec. 1963	Jan.- Mar. 1963	1957-59 average	1963	Percent from 1963	Jan.- Mar. 1964	Oct.- Dec. 1963	Jan.- Mar. 1963	Percent from 1963	
		Dollars	Dollars	Dollars	Dollars	Percent	Percent	Dollars	Dollars	Dollars	Dollars	Percent	Percent	Dollars	Dollars	Dollars	Percent	
Market basket .....	:)	1078.03	1075.17	1080.09	1,037.26	6/	6/	395.46	4/390.55	4/399.55	409.76	1	-1					
Meat products .....	:)	271.10	4/276.24	285.27	277.43	-2	-5	123.63	127.30	134.91	150.65	-3	-8					
Dairy products .....	:)	201.69	4/201.50	199.21	193.54	6/	1	89.12	4/89.43	87.75	87.76	6/	2					
Poultry and eggs .....	:)	87.99	87.70	90.13	92.03	6/	-2	52.53	52.00	54.91	56.02	1	-4					
Bakery and cereal products ..)	:)	172.54	172.66	172.66	159.22	6/	6/	30.85	4/30.68	4/31.45	29.98	1	-2					
All ingredients ..)	:)	--	--	--	--	--	--	23.33	4/23.19	23.97	22.33	1	-3					
Grain .....	:)	Average	--	--	--	--	--											
:) quantities ..)	:)																	
All fruits and vegetables ..)	:)	254.38	247.84	245.27	227.64	3	4	80.32	4/71.89	4/71.49	65.61	12	12					
Fresh fruits and vegetables ..)	:)	per urban wage-earner	(:	149.25	144.89	148.98	134.44	3	6/	54.44	4/52.65	4/54.26	46.58	3	6/			
Fresh vegetables ..)	:)	77.33	70.78	74.56	68.70	9	4	25.35	4/21.74	4/21.71	22.03	17	17					
Processed fruits and vegetables ..)	:)	and	(:	105.13	102.95	96.29	93.20	2	9	25.88	4/19.24	4/17.23	19.03	35	50			
Fats and oils ..)	:)	clerical	(:	42.11	41.89	42.46	44.33	1	-1	10.98	11.47	4/11.40	12.49	-4	-4			
Fats and oils ..)	:)	family	(:	in 1952	48.22	47.34	45.09	43.07	2	7	8.03	7.78	4/7.64	7.25	3	5		
Miscellaneous products ..)	:)																	
		Cents	Cents	Cents	Cents	Percent	Percent	Cents	Cents	Cents	Cents	Percent	Percent					
Beef (Choice grade) ..)	Pound	78.0	80.0	84.5	78.1	-2	-8	41.3	43.7	47.6	49.7	-5	-13					
Lamb (Choice grade) ..)	Pound	73.9	71.9	71.3	73	2	2	37.8	34.0	36.0	39.8	11	5					
Pork (retail cuts) ..)	Pound	56.1	57.0	57.7	60.7	-2	-3	27.1	27.2	27.6	32.5	6/	-2					
Butter ..)	Pound	75.3	75.5	74.9	74.6	6/	1	54.8	4/54.5	54.4	51.8	1	1					
Cheese, American process ..)	1/2 pound	37.2	36.7	36.1	32.8	1	3	15.2	15.0	14.7	14.2	1	3					
Ice cream ..)	1/2 gallon	84.7	85.2	84.9	87.5	-1	6/	22.8	4/22.7	22.5	22.2	6/	1					
Milk, evaporated ..)	1 1/2 ounce can	15.4	15.4	15.0	0	0	0	6.5	6.4	6.3	6.2	2	3					
Milk, fluid ..)	Quart	25.5	25.5	25.1	24.5	0	2	10.8	10.9	10.6	10.8	-1	2					
Chickens, frying, ready-to-cook ..)	Pound	38.6	39.8	40.7	44.9	-3	-5	19.6	19.0	21.0	24.4	3	-7					
Eggs ..)	Dozen	56.1	54.7	56.4	54.5	3	-1	36.6	36.6	37.8	36.1	0	-3					
Bread, white ..)																		
All ingredients ..)	Pound	21.5	21.6	21.6	19.3	6/	6/	2.5	3.1	3.2	3.0	-19	-22					
Wheat ..)	Pound	--	--	--	--	--	--	2.5	2.5	2.6	2.4	0	-4					
Crackers, soda ..)	Pound	31.0	30.9	31.1	29.1	6/	6/	4.0	4.0	4.1	3.8	0	-2					
Corn flakes ..)	12 ounces	28.5	28.4	28.2	24.7	6/	1	2.4	2.5	2.3	2.9	-4	4					
Corn meal ..)	Pound	14.5	14.5	14.3	12.9	0	1	2.5	2.5	2.3	2.9	0	9					
Flour, white ..)	5 pounds	57.3	56.9	56.7	54.8	1	1	19.8	19.7	20.5	18.9	1	-3					
Rolled oats ..)	18 ounces	24.3	24.2	24.1	20.2	6/	1	4.0	3.9	4.0	3.8	3	0					
Apples ..)	Pound	15.5	14.3	15.2	15.1	8	2	5.1	5.1	5.8	4.6	0	-12					
Grapefruit ..)	Each	15.4	15.4	15.5	12.5	0	-1	4.2	3.9	3.8	2.5	8	11					
Lemons ..)	Pound	21.6	21.9	26.4	18.9	-1	-18	4.8	4.4	7.9	4.5	9	-39					
Oranges ..)	Dozen	79.3	87.6	86.0	66.8	-9	-8	28.3	32.0	35.4	23.3	-12	-20					
Beans, green ..)	Pound	31.5	25.1	29.7	24.6	25	6	15.0	11.3	13.5	10.6	33	11					
Cabbage ..)	Pound	10.8	8.8	13.2	9.0	23	-18	2.3	2.0	3.4	2.4	15	-32					
Carrots ..)	Pound	14.9	14.9	14.7	14.7	0	1	2.3	4.0	2.7	3.7	-42	-15					
Celery ..)	Pound	16.3	13.5	14.8	15.1	21	10	6.3	3.5	4.1	4.4	80	54					
Lettuce ..)	Head	21.7	19.9	19.4	17.6	9	12	8.9	7.4	6.0	5.9	20	48					
Onions ..)	Pound	11.6	11.0	10.1	10.3	5	15	3.5	3.3	2.5	3.4	6	40					
Potatoes ..)	10 pounds	64.4	63.3	62.2	61.0	2	4	16.5	14.7	4/16.6	17.9	12	-1					
Sweetpotatoes ..)	Pound	15.6	13.6	13.1	14.8	15	19	5.7	4/4.4	4.5	4.8	30	27					
Tomatoes ..)	Pound	36.1	31.7	38.5	30.4	14	-6	13.3	11.8	11.3	10.7	13	18					
Orange juice, canned ..)	46 ounce can	63.4	58.4	46.4	41.6	9	37	29.4	13.6	8.2	12.4	116	259					
Peaches, canned ..)	No. 2 1/2 can	33.8	33.2	32.2	34.8	2	5	5.4	4/5.4	6.1	6.1	0	-11					
Beans with pork, canned ..)	16 ounce can	15.1	15.1	15.0	14.9	0	1	2.2	2.2	2.2	2.4	0	0					
Corn, canned ..)	No. 303 can	19.1	19.1	19.4	18.1	0	-2	2.4	2.4	2.4	2.4	0	0					
Peas, canned ..)	No. 303 can	22.7	22.7	22.6	21.0	0	6/	2.9	2.9	2.9	3.1	0	0					
Tomatoes, canned ..)	No. 303 can	16.1	15.8	15.3	15.8	2	5	2.5	2.5	2.6	2.3	0	-4					
Orange juice concentrate, frozen ..)	6 ounce can	32.8	32.7	26.2	23.7	6/	25	13.3	9.2	6.9	8.4	45	93					
Strawberries, frozen ..)	10 ounces	27.7	27.4	27.4	26.4	1	1	6.1	6.1	6.3	6.0	0	-3					
Beans, green, frozen ..)	9 ounces	23.7	23.6	23.0	22.4	6/	3	3.8	3.8	4.1	4.4	0	-7					
Peas, frozen ..)	10 ounces	20.9	21.0	19.7	19.7	6/	6/	3.0	3.0	3.0	3.2	0	0					
Dried beans (navy) ..)	Pound	17.6	17.7	17.7	17.1	-1	-1	6.4	6.2	6.3	7.0	3	2					
Dried prunes ..)	Pound	40.2	40.2	39.8	35.9	0	1	14.0	4/13.8	13.7	13.0	1	2					
Margarine, colored ..)	Pound	27.6	27.6	27.5	29.1	0	6/	6.7	7.2	7.1	7.8	-7	-6					
Peanut butter ..)	Pound	57.8	57.7	57.5	54.9	6/	1	20.2	19.9	19.7	18.7	2	3					
Salad dressing ..)	Pint	38.5	38.4	37.9	37.5	6/	2	6.4	6.6	4/6.5	6.9	-3	-2					
Vegetable shortening ..)	3 pounds	82.3	81.3	85.7	93.6	1	-4	23.8	25.6	25.3	28.2	-7	-6					
Corn sirup ..)	24 ounces	30.0	29.4	28.0	25.7	2	7	3.0	2.9	2.8	3.0	3	7					
Sugar ..)	5 pounds	73.5	69.7	59.3	56.2	5	24	23.6	23.3	4/23.0	20.2	1	3					

1/ The methods of calculation and the sources of price data are given in Part II of "Farm-Retail Spreads for Food Products," U. S. Dept. Agr. Misc. Pub. 741, 1957.

2/ Product groups include more items than those listed in this table. For example, the meat products group includes veal and lower grades of beef in addition to carcass beef of Choice grade, lamb, and pork.

3/ Gross farm value adjusted to exclude imputed values of byproducts obtained in processing.

4/ Revised.

5/ Farm value of cream and milk only.

6/ Less than 0.5 percent.

Table 17.--Farm food products: Farm-retail spread and farmer's share of the retail cost, January-March 1964,  
October-December 1963, January-March 1963 and 1957-59 average 1/

Product 2/	Retail unit	Farm-retail spread 3/						Farmer's share					
		Jan.-	Oct.-	Jan.-	1957-59	Percentage change		Jan.-	Oct.-	Jan.-	1957-59		
		Mar.	Dec.	Mar.	average	Jan.-	from-	Mar.	Dec.	Mar.	average		
		Dollars	Dollars	Dollars	Dollars	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Market basket .....	)	682.57	4/684.62	4/680.54	627.50	5/	5/	37	36	37	40		
Meat products .....	)	147.47	4/148.94	150.36	126.78	-1	-2	46	46	47	54		
Dairy products .....	)	112.57	112.07	111.46	105.78	5/	1	44	44	44	45		
Average quantities purchased per urban wage-earner	)	35.46	35.70	35.22	36.01	-1	1	60	59	61	61		
Grain and clerical workers	)	---	---	---	---	---	---	14	13	14	14		
All fruits and vegetables worker family in 1952	)	174.06	4/175.95	4/173.78	162.03	-1	5/	32	29	29	29		
Fresh fruits and vegetables in 1952	)	94.81	4/92.24	4/94.72	87.86	3	5/	36	36	4/36	35		
Fresh vegetables .....	)	51.98	4/49.04	4/52.85	46.67	6	-2	33	31	29	32		
Processed fruits and vegetables .....	)	79.25	4/83.71	4/79.06	74.17	-5	5/	25	19	18	20		
Fats and oils .....	)	31.13	30.42	4/31.06	31.84	2	5/	26	27	27	28		
Miscellaneous products .....	)	40.19	39.56	4/37.45	35.82	2	7	17	16	17	17		
		Cents	Cents	Cents	Cents	Percent	Percent	Percent	Percent	Percent	Percent		
Beef (Choice grade) .....	Pound	36.7	36.3	36.9	28.4	1	-1	53	55	56	64		
Lamb (Choice grade) .....	Pound	36.1	37.9	36.2	31.5	-5	5/	51	47	50	56		
Pork (retail cuts) .....	Pound	29.0	29.8	30.1	28.2	-3	-4	48	48	48	54		
Butter .....	Pound	20.5	4/21.0	20.5	22.8	-2	0	73	72	73	69		
Cheese, American process .....	1/2 pound	22.0	21.7	21.4	18.6	1	3	41	41	41	43		
Ice cream .....	1/2 gallon	61.9	4/62.5	62.4	65.3	-1	-1	27	27	27	25		
Milk, evaporated .....	1/2 ounce can	8.9	9.0	9.1	8.8	-1	-2	42	42	41	41		
Milk, fluid .....	Quart	14.7	14.6	14.5	13.7	1	1	42	43	42	44		
Chickens, frying, ready-to-cook .....	Pound	19.0	20.8	19.7	20.5	-9	-4	51	48	52	54		
Eggs .....	Dozen	19.5	18.1	18.6	18.4	8	5	65	67	67	66		
Bread, white .....													
All ingredients .....	Pound	18.4	18.5	18.4	16.3	-1	0	14	14	15	16		
Wheat .....	Pound	---	---	---	---	---	---	12	12	12	12		
Crackers, soda .....	Pound	27.0	26.9	27.0	25.3	5/	0	13	13	13	13		
Corn flakes .....	12 ounces	26.1	25.9	25.9	21.8	1	1	8	9	8	12		
Corn meal .....	Pound	12.0	12.0	12.0	10.0	0	0	17	17	16	22		
Flour, white .....	5 pounds	37.5	37.2	36.2	35.9	1	4	35	35	36	34		
Rolled oats .....	18 ounces	20.3	20.3	20.1	16.4	0	1	16	16	17	19		
Apples .....	Pound	10.4	9.2	9.4	10.5	13	11	33	36	38	30		
Grapefruit .....	Each	11.2	11.5	11.7	10.0	-3	-4	27	25	25	20		
Lemons .....	Pound	16.8	17.5	18.5	14.4	-4	-9	22	20	30	24		
Oranges .....	Dozen	51.0	55.6	50.6	43.5	-8	1	36	37	41	35		
Beans, green .....	Pound	16.5	13.8	16.2	14.0	20	2	48	45	45	43		
Cabbage .....	Pound	8.5	6.8	9.8	6.6	25	-13	21	23	26	27		
Carrots .....	Pound	12.6	10.9	12.0	11.0	16	5	15	27	18	25		
Celery .....	Pound	10.0	10.0	10.7	10.7	0	-7	39	26	28	29		
Lettuce .....	Head	12.8	12.5	13.4	11.7	2	-4	41	37	31	34		
Onions .....	Pound	8.1	7.7	7.6	6.9	5	7	30	30	25	33		
Potatoes .....	10 pounds	47.9	48.6	4/45.6	43.1	-1	5	26	23	4/27	29		
Sweetpotatoes .....	Pound	9.9	4/9.2	8.6	10.0	8	15	37	32	34	32		
Tomatoes .....	Pound	22.8	19.9	27.2	19.7	15	-16	37	37	29	35		
Orange juice, canned .....	46 ounce can	34.0	44.8	38.2	29.2	-24	-11	46	23	18	30		
Peaches, canned .....	No. 2-1/2 can	28.4	4/27.8	26.1	28.7	2	9	16	16	19	18		
Beans with pork, canned .....	16 ounce can	12.9	12.9	12.8	12.5	0	1	15	15	15	16		
Corn, canned .....	No. 303 can	16.7	16.7	17.0	15.7	0	-2	13	13	12	13		
Peas, canned .....	No. 303 can	19.8	19.8	19.7	17.9	0	1	13	13	13	15		
Tomatoes, canned .....	No. 303 can	13.6	13.3	12.7	13.5	2	7	16	16	17	15		
Orange juice concentrate, frozen .....	6 ounce can	19.5	23.5	19.3	15.3	-17	1	41	28	26	35		
Strawberries, frozen .....	10 ounces	21.6	21.3	21.1	20.4	1	2	22	22	23	23		
Beans, green, frozen .....	9 ounces	19.9	19.8	18.9	18.0	1	5	16	16	18	20		
Peas, frozen .....	10 ounces	17.9	18.0	18.0	16.5	-1	-1	14	14	14	16		
Dried beans (navy) .....	Pound	11.2	11.5	11.4	10.1	-3	-2	36	35	36	41		
Dried prunes .....	Pound	26.2	4/26.4	26.1	22.9	-1	5/	35	34	34	36		
Margarine, colored .....	Pound	20.9	20.4	20.4	21.3	2	2	24	26	26	27		
Peanut butter .....	Pound	37.6	37.8	37.8	36.2	-1	-1	35	34	34	34		
Salad dressing .....	Pint	32.1	31.8	4/31.4	30.6	1	2	17	17	17	18		
Vegetable shortening .....	3 pounds	58.5	55.7	60.4	65.4	5	-3	29	31	30	30		
Corn sirup .....	24 ounces	27.0	26.5	25.2	22.7	2	7	10	10	10	12		
Sugar .....	5 pounds	49.9	46.4	4/36.3	36.0	8	37	32	33	4/39	36		

1/ The methods of calculation and the sources of price data are given in Part II of "Farm-Retail Spreads for Food Products," U. S. Dept. Agr. Misc. Pub. 741, 1957.

2/ Product groups include more items than those listed in this table. For example, the meat products group includes veal and lower grades of beef in addition to carcass beef of Choice grade, lamb, and pork.

3/ The farm-retail spread is the difference between the retail cost and the net farm value shown in table on opposite page.

4/ Revised.

5/ Less than 0.5 percent.

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